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THE MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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The Renovation of Worn-out Soils.

THE ABLE ESSAY OF THOMAS MOORE, FIRST PUBLISHED IN 1801. (CONCLUDED FROM FEBRUARY NUMBER OF MARYLAND FARMER, 1879.

Seeing then, such a state of the soil absolutely necessary, it becomes the most important business of the husbandman, in the first place, to produce it, and then to perpetuate it by all the means in his power. I am far from believing, that these ends can always be profitably attained by means of the plough only; but that more depends on the judicious use of that instrument, than has generally been supposed, I trust, has been demonstrated. It is scarcely needful to add, that a fertile soil is always of a dark colour, and soft to the touch; and whatever applications will produce this appearance and texture, is a manure. I shall here offer a few observations on the extraordinary effects of plaster of Paris or gypsum, leaving others to judge, whether this effect on the soil, is not to be considered amongst the principal virtues in general.

The great effect of this wonderful substance, is visible to all; but the manner of its operation is mysterious. Among the various conjectures respecting it, some have pronounced it a powerful stimulus, which putting all the vegetative powers of the soil in action, produces one great effort, and afterwards leaves the soil barren. This reasoning (it may be so called) upwards of twenty years experience; has proved to be fallacious. Others, with greater plausibility, have attributed to it, an attractive property, whereby vegetable nutriment is extracted from the atmosphere; and some others say, mere moisture only, is attracted; as a proof of this attractive property, they adduce the fact, that dew is to be seen later in the morning on grass that has been plastered, than on the adjoining that has not.

This theory (tho' apparently plausible) in my view is not without insuperable objections. I

would ask in the first place, what change it undergoes in the soil, that disposes it to attract moisture more copiously than when above ground? I have not been many days without having some of it in a pulverized state in my possession, for several years, and have often looked in different kinds of weather, for that effect, and have as often looked in vain: I have never seen anything like moisture about the substance itself, nor the vessels that contained it, neither in damp nor dry weather, more than was common to other substances; on the contrary, I have sometimes dampened some to sow, and have found it inclined to dry very quickly. It is well known, that on lands where the proportion of clay is great, it has no perceptible effect: I have also found, as well as some others, that where applied to a fine mellow soil, the effect is very little: if it operates by attraction, why not attract here, as well as in other soils? certainly both would discover the good effects of a supply of moisture in a dry time.

I would suggest for consideration, whether its effects may not be satisfactorily accounted for, on the *principle* before alluded to, as *basis of agriculture*, a mere preparation of soil; without ascribing to it, either stimulant or attractive properties, other than the promoting a fermentation in the soil, which may be called stimulant.

On a chemical investigation of the properties and composition of this substance, two things are discovered; first, that it is soluble in water, but that the solution is remarkably slow; and secondly, that it contains a very great proportion of vitriolic acid. In applying it to the soil, I have observed, that no visible effect takes place, until after some rain has fallen subsequent to its application; that the finer it is pulverized, the quicker the effect, and the shorter the duration; the fine dust blown from the hand had at the edge of the sowing, or between the casts, some times producing as great an effect the first season, as any greater quantity, but entirely ceasing afterwards; while the middle of the casts, where most of the coarser parts fell, will

show the effect for several years, giving the crop a striped appearance: that where the soil contains a large proportion of clay, it has no perceptible effect; and that on a fine mellow soil, the effect is but very little, sometimes not perceptible. These observations I expect, have been common to many practitioners; from which I infer, that it is first slowly dissolved by the rains; that after solution, decomposition takes place in the soil; and the vitriolic acid being thereby set at liberty, to combine with any other base it may find in the soil, effervescence or fermentation (a well known effect of chemical combinations and decompositions) is from time to time produced; thereby separating the parts of the soil, and giving it that appearance and texture, which is common to all rich soils; and that this state always exists, where gypsum takes considerable effect on the growing crops, I am bold to assert: In general it is very visible on the surface, but always by passing through it with the plough.

I might here risk an opinion, why the application of plaster to clay, fails of exciting a sufficient degree of fermentation, to effect a separation of its parts; but as I by no means profess a critical knowledge of chemistry, shall leave it to others better versed in that science, to assign the cause, and only assert the fact, that by such applications the tenacity of the soil is not destroyed, or any visible effect on vegetation produced. In an open mellow soil, great effects are not to be expected because the state which the plaster is calculated to produce, already, in great measure existing, leaves it little to do.

But it will no doubt be queried how I account for the appearance before mentioned of the dew remaining longer on the grass, where the plaster has taken effect, than where none has been applied? To this I answer that it is not in consequence of a greater quantity falling thereon, but because it is more slowly evaporated. Whoever will be at the pains to examine, will find, that this appearance is not confined to the plaster; but the grass growing on ground made rich by any other means, will show the same difference, when compared with the same kind, growing on poor ground along side of it; or if observed when the sun shines after a shower of rain (when both must be effectually wetted without attraction) the same thing will be seen, and is easy to be accounted for on philosophical principles. The soil upon which the grass grows luxuriantly and retains the moisture, is always of a darker color and softer texture, than the poor soil adjoining: it being therefore more fitly adapted to imbibe the solar rays, they pass freely into it, while they are plentifully reflected back from

the hard light colored poor soil, on the drops of moisture suspended on the grass, operating in the same manner as the rays of heat from a reflector placed behind roasting meat: Add to this that the grass always grows thickest on the rich soil, which will also contribute to *prolong* the drying operation.

Where this manure has great effect, it in some measure answers the purpose of *deep plowing*; many having discovered that *washing* ceases where it is frequently applied with advantage to the crops. This is a certain proof that the soil is opened to a sufficient depth to imbibe the whole of the heaviest rains, and thereby prevents the accumulation of water on the surface: Hence we may safely conclude, that its operation continues much deeper than the usual plowing. This is the secret which has prevented some Pennsylvania improvers from discovering the necessity of deep cultivation. I have been told that some great plaster users when consulted on the subject of deep plowing, have answered, that their crops have succeeded well with usual depth, and therefore have not seen the necessity of going deeper. But let them cease to use the plaster, or confine their operations to a soil where its effects are inconsiderable, and then, after a fair trial of both methods, if they do not see cause to change their opinion I am very much mistaken.

Judging from the experience we have had of this manure, the judicious use of it is certainly to be recommended, while it can be had at the present low price. I prefer using it as a top dressing for upland grasses, at the rate of from three pecks to a bushel per acre. But those who substitute it for every other kind of manure and neglect all other means of improving their land, will probably one day find that they are not so far advanced in agricultural knowledge as their present success may lead them to suppose.

I am acquainted in some neighborhoods, where the farmers are fast increasing in wealth; their crops have nearly doubled within seven years, and the face of the country astonishingly changed for the better; and yet I do not believe they have made much progress in substantial agricultural knowledge. Accident has put them on the use of *gypsum*, and this has done every thing for them that is done; if accident should again deprive them of it, they will probably, in a few years find the quality of their soil and quantity of produce nearly the same they were before the use of it.

This however is far from being the case with all who are in the practice of using it; there are in America, men of observation, of genius and industry, who are making the best use of this valuable

oreign manure, while it is in their power ; but at the same time, are paying such attention to the principles of agriculture in general, that if this should be immediately withheld from them, they would nevertheless, be found in the high road for improvement, and some of them perhaps already in possession of the secret, of preserving their farms for any length of time, in a productive, and even improving state, without any foreign assistance whatever.

Before I leave the subject of gypsum I would just observe, that I think highly of Richard Peter's publication on this subject in general, yet I cannot unite with him in believing it a "whimfical substance;" on the contrary, I believe it to be as perfectly regular in its operations as any other manure, when applied to the soils upon which it is capable of acting. The quantity of moisture it receives, will no doubt, in some measure govern the effect, but this I believe will be invariable: the same causes in this, as well as other manures, uniformly producing the same effects: In short, I have never yet seen any of its effects or failures, but what may be accounted for by the foregoing theory.

I have recommended some agricultural publications written in our own country, in preference to any European authors, because I think they are to be relied upon in American practice. General principles are the same in all countries; but in their application, the soil, climate, and a number of local circumstances, ought always to be taken into consideration; to which it is but too evident my countrymen have not been enough in the habit of attending.

In Great Britain, their practice is acknowledged to be more perfect than in any other part of Europe, and yet a late author is of opinion, that their tillage land in general, does not produce more than one-third of what it is capable. They are not subject either to the excessive heavy rains, or hot dry weather that we are; absolutely requiring with us a greater depth of cultivation to counteract the bad effects of the climate on the soil; and yet their ploughing is deeper than ours; and the probability with me is, that this remains to be one material point in which they have yet to improve. I am told that about London and other places where land is very dear, their gardeners find their account in once at least, stirring their ground from two and a half to three feet deep.

I shall conclude these remarks, with observing, that although I think *deep culture* a matter of the first importance in this climate, yet there are other subjects which ought to engage our attention more closely than the appearance of our country indi-

cates they have heretofore done. Among these are an economical choice and consumption of crops, for the support and fattening of live stock, and methods for the saving of timber. With respect to the first, it is certain, that one half the ground, and half the labor, generally appropriated to the purpose, is amply sufficient; or what is the same thing, the same ground and labor may be made to support and fatten double the number. It is also demonstrable, that half the quantity of woodland generally thought necessary for fuel, fences, &c. will, with proper management, be sufficient; this will also be a saving of labor in nearly the same proportion. But as I have already exceeded the limits at first contemplated, and very probably have written more than some who have the *most need* will be willing to peruse, I shall at present spare myself the labor of adding any thing further on these subjects; and thereby avoid swelling this pamphlet to what many may think an unnecessary size, after so many volumes have been written on the subject of agriculture.

[THE END.]

The Resources of the United States for Sheep Husbandry and the Wool Manufacture.

THE ADDRESS OF HON. JOHN L. HAYES.

[Continued from Page 36, Vol. XVI., Md. Far.]

The South has enough hardy ewes, obtainable at a cheap price, upon whom this transformation may be made, to stock her country. Texas New Mexico, Colorado, and Mexico possess, or can easily obtain from Mexico, the Mexican sheep of the Chourro race,—a race distinguished for its robust temperament, the facility with which it is nourished, and its resistance to hunger and tempestuous seasons. It is from these qualities of the merino, and from our having in the old States an ample supply of regenerators specially adapted to the demands of the new States, that sheep husbandry has advanced in California, the trans-Missouri regions and Texas, with a rapidity equalled only in Australia and the Argentine Republic. In those States it is no longer, as thirty years ago, an adjunct to other farming. It has become an exclusive pursuit. Single proprietors in California have as many as 100,000 sheep. One proprietor could, in 1875, show a flock of 14,192 pure merino ewes descended from 400 pure merino ewes purchased in 1861, besides the males which had been reared or slaughtered. There are single proprietors in Texas having 30,000 head. One Texas gentleman informs me that he has 15,000 sheep on

a ranch of 80,000, all of which is enclosed with a wire fence. The rapidity with which the increase takes place seems inconceivable to those who do not know the laws of arithmetical progression. According to my Texan informant, who has given me the data in precise detail, the increase which may be counted on is eighty per cent. The flock-master, commencing with enough range next October, with 1,600 ewes, will have, March 1880. 4,160 head; in March 1881, 6,400 head; and in March, 1882—less than four years—9,280 head from his original flock of 1,600 ewes. The flocks in Texas are entirely, and in California mainly, founded upon the Mexican or Chourro stock. The improvement in the general clip from these States each year is signally observable to the expert purchaser.

While the new States may boast of their immense flocks, the old sheep-growing States are the sources from which these flocks are sustained or regenerated. And thus the decline of sheep husbandry in some of the States of the North is more apparent than real. To appreciate the value of the infusion of blood from the merino flocks of the North, we must note in more detail the national resources for sheep husbandry which we derive from our own improvement of the Merino race. Our breeders have established a distinctive variety of this race, having its characteristics, like the Saxon or French merino, and presenting essential differences from its Spanish ancestors, or any other merino family. This race is recognized as the American merino. The State of Connecticut can claim the honor of taking the first steps in this improvement. One of her citizens—Stephen Atwood, of Woodbury—bought a ewe from Colonel Humphreys, in 1813, which he bred to rams of pure Humphreys' blood until 1830, when he used rams from his own flock. This flock was kept pure, and had become so much improved as to attract the attention of breeders throughout the country; among others, that of Edwin Hammond, of Middlebury, Vermont, who between 1844-46, purchased the principal portion of the ewe lambs of Mr. Atwood's flock. With this material, he developed, in the short space of about fifteen years, the race recognized throughout the world as the typical American Merino. Mr. Hammond's stock was the foundation of the principal breeding flocks in the country; and his standard and methods have at least been the guides for the most successful breeders. I do not propose to follow out in detail Mr. Hammond's achievements. I will state only some of the present results accomplished through him and his ancestors.

The weight of Spanish merinos at the commencement of this century was, for rams, from forty-two to one hundred pounds; for ewes, from thirty to seventy pounds. The average weight of the unwashed fleeces of the rams was eight and a half pounds; of the ewes, unwashed, five pounds. At the present time, in a characteristic breeding section,—the Valley of the Genessee New York—of which I have authoritative information, small flocks, containing from fifty to a hundred breeding ewes, will, in some instances, average upwards of fifteen pounds of unwashed wool each; while selections of ewes, not in breeding, often shear from eighteen to twenty-two pounds unwashed wool, which scours from six to seven and a half pounds. The live weight of these ewes reaches from ninety to one hundred and thirty pounds, the stock rams produce from twenty-six to thirty-six pounds unwashed wool, having a weight of from one hundred and fifty to one hundred and ninety pounds.

It is obvious that, with this great increase of size, the flesh-producing qualities of the animal have been equally increased with its wool-bearing aptitudes. These sheep are not referred to as types of flocks most desirable for the farmer or the wool manufacturer. They are deformed by wrinkles, have an excess of yolk, and produce not fine, but *medium* wools, though fortunately these medium wools constitute the great bulk of the fleeces in demand for our manufactures. These sheep are bred specially to produce rams for sale in the States at the South and West possessing the native or Mexican sheep. To improve the inferior sheep it is found that the rams must possess certain qualities in an exaggerated degree,

It is claimed by the breeders that the constitution of these animals, evinced by a carcass modelled after the type of a short-horned bull; great density, rather than length, of fleece; a complete covering by the fleece of the body, hind legs, and belly; a superabundance of yolk, and medium fineness of wool,—are the most desirable qualities to be imparted to the light, dry and thin-fleeced native sheep of the South and far West.

The American merinos, certainly, are highly appreciated abroad. Sheep of the Hammond stock exhibited by Mr. Campbell at the International Exhibition at Hamburg, obtained the highest prize in the class of heavy-woolled animals. Mr. Graham, of Australia, says, "Of all imported sheep, those of our first cousins, the Americans, are the best;" and, "The best rams imported to Melbourne of late years were those sent by Mr. Campbell," an American.

An important fact connected with the improved American merino should not be omitted. Our

breeders, aiming to increase the weight of their fleeces, have developed the length of the staple, and have unconsciously created a merino combing-wool,—a wool in special demand through modern improvements in machinery and changes in the fashion of goods. Mr. Fernau, an eminent Belgian wool manufacturer, who has thoroughly studied our wool resources and manufactures, says, that three-quarters of the American wool is a *combing-wool*, and will ultimately be employed for this purpose. This point will be referred to at more length hereafter.

An important qualification must be made to these laudations of our improved merinos. Very few of the old wool buyers and cloth-manufacturers of the country will admit that there has been any improvement in American wools. It is true that the light fine fleeces of old times, with the prices then paid for them were more profitable to manufacture, as they contained so much more scoured or fine wool to the pound of the merchantable commodity. But when the greater present demand for medium wools, the vastly increased abundance of these wools caused by the improvements adverted to, and the "conversion of clothing wool to combing-wool, are taken into consideration, it can not be denied that the wool industry of the country, upon the whole, has been greatly benefited by the change. The bulk of American merino wools are of strong, sound and healthy staple; having few weak spots in them from unequal feeding. Those from the older States of the West are free from burs. Those from California have this defect in a high degree. They are admirably fitted for flannels, blankets, and fancy cassimeres, and the great bulk of our card-wool manufactures. They are so excellent, as a whole, that Mr. Fernau says they are too valuable to be used for clothing purposes. They supply nine-tenths of all the card or clothing wool consumed in American mills.

But the improvements of our breeders have gone far enough in the direction lately pursued. It is the opinion of many eminent growers that a new departure should be taken in our wool-growing. Having stated our positive resources in merino-sheep husbandry, let me show the negative side, and point out our deficiencies. Our merino wools as a class have become coarser in staple than they were thirty years ago. They are less clean than at that period; that is, they abound more in yolk. The Ohio wools would formerly waste in scouring but forty per cent. on an average; now the waste is forty-five to forty-eight per cent. It is believed that average merino flocks need an infusion of blood from finer and lighter woolled regenerators

Again, we have a great deficiency of superfine merino wools; and these, when required, must be obtained mainly abroad. The principal objection to the existing protective duties on merino wools comes from the fine-cloth makers of the country, who, not without some show of reason, complain that high protective duties have failed in procuring the domestic supply of superfine wool promised by the wool-growers, under sufficient encouragement. It is true that the growing of these wools has declined throughout the world, as fancy cassimeres made of medium wools have so largely taken the place of the fine broadcloths formerly exclusively worn, for business as well as dress suits. The superfine, Saxony, Silesian XXX. (as the grade is called in the wool-trade of this country), or *electoral* wool, the proper appellation (from the elector of Saxony, in whose country the race producing this wool was first produced), is indispensable for making the finest broadcloths or doeskins, the finest flannels, fine shawls, French merinos and Thibets of the finest grades, felts for pianos and jewelry work, and many novelties. They should be grown by every country having suitable resources, which aspires, as we do, to industrial independence.

My own practical observation has led me to think that the electoral sheep cannot be profitably grown in the Northern States; although Mr. William Chamberlain, of Red Hook, New York, who had imported five hundred of the Silesian variety of this race, and bred them exclusively, declared that they thrived as well with him as any breed of sheep with which he was acquainted. But I am strongly impressed with the belief that a Southern climate, where succulent vegetation can be procured in the winter, contrary to general belief, is peculiarly fitted for the growth of very fine wool. This is the opinion of the best practical sheep-growers of the South; such as Col. Watts, Mr. Cockerill, Mr. Howard and others. In a recent paper on sheep husbandry in the South, I very earnestly recommended the culture of electoral wools at the South. I have recently received a letter from Dr Ollendorff, a gentleman before referred to, of the largest experience in the culture of fine wools in South America and Germany, who says, referring to my paper:—

"It is undoubtedly a mistake to suppose that a warm climate injuriously influences the wool fibre in regard to fineness. On the contrary, I am of the opinion that the fleece of the pure merino, in a warm climate, with green, succulent grass nearly the whole year round, has rather a tendency to run *finer* than the interest of the sheep-breeder on a large scale requires."

[TO BE CONTINUED.]

FARM WORK FOR MARCH.

This month is the first real working month on the farm. The grass begins to grow, buds put out, spring birds come and the breeding stock bring forth their young, while the farmer with activity begins the yearly round of labors. Procrastination now may work ruin to the hopes of an abundant harvest—Every tiller of the soil should be on the alert to have all the implements required for the farm, to be on hand, and in good order, so as to be ready at every moment for use. Much is to be done this busy month; seeds to be sown—stock to be carefully looked after—orchards to be trimmed—fences put in good condition—wet places drained—plowing to be done when the ground is in proper condition, and a good many other things that will daily suggest themselves which, ought not to be neglected or put off for a “more convenient season” as the phrase goes, too often among our young and old farmers.

OATS AND GRASS SEED.

Grass should be sown over the grain fields, and if the ground be dry, should be harrowed in by all means. They may be sown when the ground freezes at night and thaws in the day, but we prefer sowing seeds of clover and other grasses when the ground is dry, and use the harrow with vigor, to cover the seed and cultivate the growing grain.

The sooner the oat is sown the better, is an axiom every observant farmer quotes.

As soon as the ground is in good condition,—that is easily known by the fact, that it will crumble and fall to pieces under the plow, or if a sod, leaves the mould-board easily and has a tendency to break as it is turned over—plow deep and then harrow smoothly; sow the oats say two bushels per acre, and harrow them in, or we would prefer to put the oats in with the double shovel plow. If the land is not fertile, spread two or three hundred pounds of some fertilizer rich in potash, soda, lime and the phosphates. This crop likes a stiff, rich, moist,—not wet soil. It cannot well stand a drought or much heat, hence the great reason why it should be sown early, to avoid the intense heat and probable droughts of mid-summer,

We give the following analysis of this cereal:

	Seed (Boussingault.)	Straw (Levi.)
Potash	12.09	12.18
Soda		14.69
Lime	3.07	7.29
Magnesia	7.07	4.58
Phosphoric Acid	14.09	1.94
Chlorine	6.80	
Sulphuric Acid	6.20	

This shows that where oats are to be grown on poor soils the best fertilizers would be, bone-dust, wood ashes and magnesian lime. This valuable crop is almost invariably sown on ground badly prepared, and the seed is generally put in the ground in the most slovenly manner, hence we find instead of the average yield being from 40 to 60 bushels per acre, the poor average of from 10 to 12 bushels, and hardly that. It is a crop which does not pay at even 50 cents per bushel, unless the yield is at least 30 bushels per acre.

In sowing grass seed we would say that it is poor economy to stint the quantity, and that at least two sorts of seed should be sown, clover and orchard grass, two gallons of the former, and one and a-half bushels of the latter, per acre. Grass seeds are so uncommonly low in price this season that they are in the reach of all.

EARLY POTATOES.

Plant the early rose potato as soon as you can possibly get the land in good order and deeply plowed—Lay off the rows two feet six inches apart, and 4 or 5 inches deep in the furrows, and put two inches deep, in each furrow or trench, well rotted manure, drop small sound potatoes 13 inches apart or large potatoes cut in good size pieces with at least 3 eyes to each piece, cover them 4 inches deep. Over the whole, sow a mixture of five bushels of ashes; leached or unleached, one bushel of plaster and two of salt, per acre. Early potatoes always pay well, and generally escape the Colorado bug and other enemies.

TOBACCO.

Tobacco beds should be made and sown as soon as possible, and we would ask attention to what we said last month in reference of these. The high harsh winds of March often do much injury to the crops which is hanging in the houses, whether stripped or unstripped. They cause the leaves to blister and split, and sometimes shatter or blow off, and hence the houses should be kept perfectly tight, except such days when there is a brisk warm breeze which will make the tobacco “give” and “condition” at the same time. Old planters will at once understand what we mean, and young beginners will soon comprehend by close observation. We would here suggest that this month is a bad one for packing tobacco. Owing to the violent changes of the weather, tobacco may seem all right in the morning, and before the day closes, it will be too hard or too “high,” and when “opened” will certainly show that it had been conditioned too early, and will have no aroma or be either funky, or too brittle to handle. Planters gain nothing, but lose much by too early packing. The market for Maryland tobacco has been ruined by tobacco being

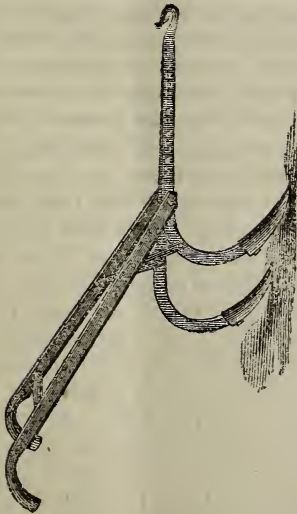
forced immediately upon the European buyers. If we venture to suggest to our planters that each one should this year plant less and make it better, and grow more pounds to the acre at the same time, we hope that none will carp at our well intended advice, and if any should say "mind your own business," we hope they will excuse us, because of our sincerity in saying what we believe to be for the best interest of those in whom we feel a special interest, and in whose occupation we formerly were practically and extensively engaged.

COMPOST FOR ROOT CROPS.

Now is the time to prepare compost heaps to furnish proper fertilizing material for root crops, which every first class farmer now-a-days feels the necessity of growing to feed their improved stock.

FARM IMPLEMENTS.

In pursuance of our promise last month to notice occasionally such farm implements as have particular merits, that our readers may know what are among the most complete labor-saving and best working machines in the market, we would first of all call attention to the DOUBLE SHOVEL IRON BEAM PLOW. This plow we undertake, from our own knowledge, to say is one of the best implements ever invented for putting land in order for tobacco, for working both corn and tobacco, and for covering wheat, rye and other small grains. Its cost is very small, having been greatly reduced from the price put upon it when it was first introduced.



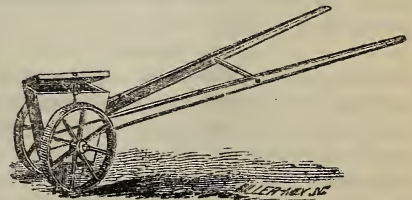
Another implement we would like to introduce to the notice of farmers who do not themselves know how to sow grass seeds especially, or who have no "help" that can properly regulate by hand

sowing the quantity of seed desired to be sown per acre, and to so distribute it, that there shall be no vacant strips. There is an art, a great art in sowing seeds properly, which but few ever attain, even after years of practice. "The CAHOON HAND BROADCAST SEED SOWER" supplies this art. It is so simple, a child can operate it.



This simple and convenient little sower is adapted to sowing wheat and other small grains, grass seeds, &c. The operator carries it suspended by a strap over his shoulder, and at a common walking gait can sow from four to eight acres per hour, it is claimed.

Now that large quantities of beet, mangel, carrot and parsnip seeds are being sown yearly for farm stock, it is a great saving of time and labor to have a machine which will do the work with precision and dispatch. Hand dropping or sowing from a bottle and quill is tedious and unreliable. Our townsman, E. D. Hallock, has brought out this season his Seed Drill, which we think will be of great use to those who sow largely of the seeds above named, and to those who have gardens, small or large. See his advertisement in this number of the MARYLAND FARMER. We also give a cut of this simple and cheap implement.



This machine will sow in drills all kinds of seeds from the size of beet, down to the smallest. It is admirably adopted to onion seed sowing. It opens a shallow drill, drops the seeds and covers at one operation. Is a great labor-saving implement. It is upon the principle of the old English hand seed drills with the revolving brush used for many years in England.

HORTICULTURAL.

Address Before the Solebury Farmer's Club of Bucks Co., Pa.

BY WM. PARRY, OF CINNAMINSON, N. J.

PEACHES.

Are a valuable crop and should not be neglected here, merely because they are grown more extensively a little south of us. The impression seems to be entertained that peaches may be grown on thin, poor soil, a long distance from market. The trees are short lived and should be frequently renewed. By planting a few trees every third year a constant supply may be had for three months during the summer season, and if care be taken to keep out the Corers, the lives of the trees will be prolonged. We had a few trees in bearing this summer of the Amsden June variety, the fruit of which was all ripe and gathered during the month of June. Early in July we have the Beatrice, Early River and Louisa; Hale's Early we have discarded. Troth's Early, Mountain Rose and Large Early York, come next and continue into August; then the rich golden Foster, Crawford's Early and Reeve's Favorite, last till September, when we are all ready for those magnificent fruits, the Old Mixon, Crawford's Late, Stump the World, Ward's Late Free and Harker's Seedling. Then still later for preserving near October, we have the Smocks, Crocket's, and Temple's Late White, Late Heath Cling, Salway and Steadly, peaches which continue till frost.

Large fortunes have been made in the Southern States from peaches, one farmer near Middletown, Delaware, although peaches are comparatively a failure this year, sold his crop on the trees for \$10,000, estimated at 20,000 baskets. Yet it is not prudent to plant the whole farm in peaches; better have several other crops coming on in succession to guard against a failure, and foremost among them I would name.

SMALL FRUITS.

which have become an important branch of fruit growing; thousands of bushels are annually raised and shipped hundreds of miles to market, and by the late improvement in refrigerators, applying a small one to each crate of berries, they can be carried across the continent, And the citizens of New York and Boston cannot only enjoy the early tropical fruits of the South, but a regular succession of delicious berries from early spring till fall, when the season closes at the North.

The strawberry being the earliest fruit to appear in our markets, is always well received, and the improvements in varieties that are taking place

every year, show the deep interest manifested in their culture. To compare the little Scarlets of forty years ago, with the Monarchs and Triumphs of the present day, we could hardly suppose them to be of the same species.

* * * * *

RASPBERRIES

Commence to ripen before strawberries are gone, and it is usual to send some of each to market at the same time. They come with harvest, when it is not entirely convenient for grain farmers to be bothered with small things, hence they are not grown so plentifully as strawberries and consequently sell better in market.

One farmer, near where I reside, sent to market a one-horse wagon load of raspberries and received \$220 for the lot. One lady near by, rented out her farming land, while her husband was from home, reserving a patch of raspberries and blackberries, from which she sold this year, 42,000 qts., or 1343 bushels of berries, worth several times more than all other crops on the farm. I once visited a farmer who paid attention to small fruits as well as the more important staple crops of grain and grass. The day I was there they gathered for market 200 bushels of raspberries and some days did more.

* * * * *

BLACKBERRIES

Commence soon after raspberries and give continued employment for the same pickers, crates and baskets, that were required for strawberries and raspberries, so that all three may properly be grown on the same farm, and thus divide the cost of crates, baskets and other fixtures among them.

At the average price at which blackberries have sold in market for twelve years past a field with ordinary treatment will yield from \$200 to \$300 per acre annually. Double these figures have been realized some years. I have known 150 bushels of blackberries to be grown per acre, which sold at an average of 15½ cts per quart yielded \$600 per acre. One of my neighbors planted 75 acres of his blackberries, which yielded, one year, 6,500 bushels of fruit and sold for \$22,000. The blackberry crop of Vineland, N. J., this year, as reported by the railroad officials, who carried the fruit to market, was about 500,000 quarts, equal to 15,625 bushels, and at 1½ cts. per quart for picking, the laborers who gathered the fruit received \$7,500.

We have grown, at POMONA NURSERY, more than fifty varieties of blackberries, and those that have proven most profitable are the Lawton, Dorchester, Kittatiny and Wilson's Early. Recently several new ones have been planted which prom-

ise well, such as the Snyder, Taylor and Wallace and some seedlings grown from the best selected varieties planted together in the same hills, so as to ensure a mixture of the pollen, which, so far, appear to be hardy, large, early, very productive and of good quality.

CONCLUSION,

The question may naturally arise, is fruit growing always so profitable? To which the answer is emphatically 'no! The cases above mentioned, which have occurred within my knowledge, may be termed exceptional, under favorable circumstances, Fruit-growing, as well as farming, is uncertain, depending on many circumstances.

To be successful there should be knowledge, skill, labor, industry, perseverance and economy combined. It is essential to know just what crops are best adapted to certain soils, when and how to plant them, which knowledge can only be obtained by experience. Take a grain of wheat and one of barley, examine them; and is there a chemist in the land, who can tell, by analysis, which should be planted in the fall and which in the spring?

Yet, when everything in our power has been properly done, there are many circumstances over which we can have no control that will make or ruin the crops; sunshine and rain, heat and cold, must follow in proper proportions, and at times to suit the varying demands of vegetable growth. A field of wheat that is ready for the sickle may be destroyed before it can be gathered. So may our fondest hopes for a crop of fruit that is ready for market be blasted. I once had more than fifty hands employed in gathering fruit, they had picked raspberries from a 30 acre patch in the forenoon, and had just commenced after dinner on 40 acres of blackberries, where the fruit hung full and tempting; but they were not permitted to gather it, being driven back by a violent storm, from which the hailstones fell thick and fast, completely stripping the bushes of fruit and foliage; from which they never recovered, but dwindled away and had to be removed at considerable expense to make room for other crops. The hail-storm beat off hundreds of bushels of unripe fruit; apples and pears of the choicest kinds, Bartlett's, Duchesse and Lawrence, and bruised the limbs so as to injure future crops. We had 22,000 pear trees in the nursery, ready for sale, worth 40 to 50 cents each; 30,000 peach trees and large blocks of young apple trees in Nursery rows—all of which were broken and split in pieces, and rendered unfit for sale; 20 acres of good corn 6 to 7 feet high, were broken and prostrated so that it did not yield 5 bushels per acre. Large fields of melons, tomatoes, and

other crops, were completely destroyed. Thus the labor of years in producing trees and plants loaded with fruit ready for market and when we had high hopes of reward, was lost in a few moments

Well has the poet said :

For care and trouble set your thought,
E'en when your end's attained,

For all your views may come to nought,
When every nerve is strained.

The subjects of farming and fruit growing are interesting, and so extensive that volumes might be written on them, and, if the rambling suggestions that I have made should give rise to any reflections in your mind, which may be followed up to advantage, I shall have accomplished my object and thank you for the attention given."

We regret that want of space prevented our giving this excellent address in its entirety, for there are many valuable facts set forth, and it will be read with interest, as it comes from one of the oldest, most successful and most reliable and practical nurserymen in this country—Mr. Parry is a sound judging, sensible, practical man, who tests everything before he endorses it, and hence his opinions as a horticulturist are to be relied on—He clearly proves by facts, that Horticulture is a profitable pursuit if followed with attention, ordinary skill and industry. [EDITORS MD. FAR.

GARDEN WORK FOR MARCH.

We cannot express our present sentiments better than by repeating what we said in the MARYLAND FARMER some years ago, in regard to the benefits of a good vegetable garden :

Those who desire to have an early and ample supply of vegetables, will do well to commence their operations, looking to this end, at once. A good garden is a necessity. It economizes butchers' meat; its vegetables qualify the salt meats so often used in the country during the heat of summer, and whilst they are cooling to the blood, they exercise a sanitary effect on the general health. As a rule, we use by far too much meat in the summer season and too few vegetables. During the winter, a generous meat diet is desirable, but in summer the preference should be given to a diet composed mainly of vegetables, and of fruit in their season. A simple observance of these regulations will be found an admirable preservative of health whilst their neglect not unfrequently superinduces fever and other diseases incidental to hot weather, and which, owing to the stimulating causes, are only removed with the utmost difficulty.

Vegetables then are a necessity. They should be freshly gathered if we would have them brought to table in their best state, and they should also be

in sufficient variety to allow of a constant change, or at least of a choice between them. With this brief introduction we proceed to suggest what work may be done during this month, in the garden.

Hot Beds.—Should be now made, and when the plants come up, let them have all the air they can without letting off too much heat, as they grow they may be more and more exposed to the air, and they should be thinned, and those drawn out, be planted 2x3 inches apart in a cold frame, so as to grow stocky, and with a bunch of roots. Even two transplantings before being set in open ground will be the better. If you have no hot bed, prepare a rich bed in a protected place with Southern exposure and sow Early York and Winningstadt Cabbage, Lettuce, Radish and beet seed.

Peas.—Sow a few rows of the earliest sorts at intervals of a few days during the month, when the ground is in good order.

Onions, Beets, Carrots, Parnips.—Can all be sown the moment the frost is out of the ground and the soil works smoothly.

Early Potatoes.—Plant these at the very earliest moment—use plenty of manure on well prepared soil and cover over with straw or leaves thickly, to be removed when they appear above ground.

Asparagus.—This popular and wholesome vegetable should be in every garden. If you have not a large quantity planted, be sure you buy from some reliable nursery some hundreds of two year old roots and put them in beds, trenched and well drained two feet deep and highly manured. This is all the secret about growing Asparagus. Set the plants in rows, 18 inches apart and 8 inches apart in the rows, in beds, 4 feet wide, beginning the first row 6 inches from the edge of the bed, this will give 3 rows in a 4 foot wide bed. Set the plants with the roots well spread out in the trenches. The plants should be set so as to be covered 4 inches above the crown with soil. Rake off smooth and sow salt over the beds until they look white.

In this section, but little seed sowing can be done with safety until after the 17th of the month. Farther South, of course, many seeds can be sown much earlier, and Beans, Corn, Okra, &c., can be safely put in the ground.

Gooseberries, Raspberries, and such like small fruits can now be trimmed, worked and mulched with long or coarse stable manure.

Strawberry Beds.—If toward the close of the month, the ground can be worked properly, these beds should be raked off the dried stems and leaves removed, the ground lightly hoed and raked,

covering well all the exposed roots of the vines, and a good dressing of the whole bed given of one parts of woods mould, one part ashes and one part well rotted dry cow manure. Then a few corn stalks laid between the rows as a mulch. As the season advances we will give other directions about these luscious berries.

There are a few choice, comparatively new sorts of vegetables we would suggest that every one who delights in a good garden should procure, such as, all the Year Round Lettuce—Drumhead Savoy Cabbage, Chinese Rose or White Radish, Blue Peter Peas, Corn Salad, Hydes' Egyptian Sweet Corn and his Golden Thophy Tomato.

Varieties of Potatoes Compared.

[From the Country Gentlemen.]

The following is the result of our trial of different kinds of potatoes on the Pennsylvania Experimental Farm this season. As it may possibly interest your readers, I forward it to you. A piece of fallow ground planted in beets last year, was selected for this trial. It was manured lightly with barnyard manure in the previous fall, and again in the spring with another coat of pig-pen manure, which was plowed down. Rows were struck out three feet apart, and an application of five hundred pounds of ground bone was put in the row. The sets were planted 15 inches apart in the row, and covered with three inches of earth with a hoe. They were planted April 9th, and well worked. The potatoes were dug August 27th, with the following result:

Variety.	Time of Ripening.	Per cent. small ones.	Yield per acre.
Extra Early Vermont	Aug. 1	8.0	249 bu. 38 lbs.
Carpenter's Seeding...	Aug. 1	8.0	151 31
Victor	Aug. 25	2.0	3 5 11
Beauty of Hebron.....	Aug. 5	5.0	216 27
Seedling, No. 38.....	Aug. 25	10.0	366 33
Brownell's Beauty.....	Aug. 20	5.0	216 20
Farmer's Glory.....	Aug. 20	5.0	242 26
Peerless.....	Aug. 25	5.3	251 44
Late Rose.....	Aug. 25	6.0	129 52
Seedling, No. 21.....	Aug. 1	8.0	187 35
Brownell's Nonsuch.....	Aug. 15	8.0	262 57
Compton's Surprise...	July 25	8.0	129 —
White Granger.....	Aug. 20	.0	319 16
Excelsior.....	Aug. 25	10.0	248 6
Western Reserve.....	Aug. 15	6.0	241 40
Keystone.....	Aug. 15	3.0	285 —
Snowflake.....	Aug. 10	8.0	270 21
King of the Earlies.....	July 20	8.9	144 15
Brownell's Eureka.....	Aug. 1	4.0	195 50
Early Rose.....	Aug. 1	10.0	115 50

West Grove, Pa.

JOHN I. CARTER.

Great Britain has 630 factories engaged on worsted trade. These employ 111,000 operators, and have 2,160,000 spindles, and 65,000 power looms. The name worsted is derived from a village in Norfolk where the goods were first produced.

"Out of the Ruts."

HOW TO MAKE FARMING PAY.

A writer in the *New England Farmer*, gives a report of the proceedings of a Farmer's Meeting, held January 7 and 8, 1879, at Concord, N. H., and amongst other matters, he reports the remarks of Mr. Sanborn, who is in charge of the College Farm at Hanover. We give the following portion of his practical discourse:

"While he was not one of those who are forever complaining that farming don't pay, yet he did not think that it was yielding to most farmers the profits that it should. 'How shall we get out of the ruts?' 'How shall we remedy this difficulty?'

1st. Increase the acreage of hoed and grain crops. I am aware, said the speaker, that this is contrary to the advice of most people, but I regard it as one of the essentials of the plan that I am going to follow to get out of the ruts. One-half of the area of England is under hoed and grain crops, while in New Hampshire about one-sixth only is in such crops. I had rather have crops that I can sell directly, than those which I must sell indirectly, in the form of beef. My favorite crop is potatoes, because of every hundred pounds that I sell, seventy is water. I would also sell wheat, because it cost no more to grow a bushel of wheat than it does to grow a bushel of corn, and it will sell for twice as much.

2d. More thorough cultivation. He then referred to the Louis Weldon system of husbandry or the raising of fair crops, year after year, without any manure, and by tillage alone. There are elements in the soil that plants want, but they are not available. By cultivation, the soil is exposed to the atmosphere, and the air will break down those particles.

HOW SHALL WE INCREASE THE YIELD PER ACRE?

1st. Buy grain for feeding, as the more capital a farmer uses the more successful he should be. Feed the food to the young pig to make pork and manure. He has made pork this year at a cost of three and one-half cents per pound live weight. He has found by repeated weighings that, as the pig increases in age, it takes more food to make a pound of pork; therefore endeavor to mature your pigs at six months old.

2d. Buy food to feed to the young steer; would buy nitrogenous food, like shorts and cotton seed meal. Feed these foods with your poor fodder, because most fodder has plenty of carbo-hydrates, and these supply the albuminoids. Then the manure is more valuable; that from cotton seed meal

being worth twice as much as that from corn meal. Would mature the steers in twenty-four or thirty months. I have steers weighing one thousand pounds that are doing as well on corn butts and four pounds of cotton seed meal as are others on my best hay.

In reply to a question, if he would feed it to young heifers intended for cows, he said he should not want to give them much. He wanted to force a steer along as fast as he could, but he did not care to force a heifer, only keep her in good growing condition.

3d. Buy chemicals and mix them yourself. Study your land, experiment with different elements, and then mix them in the proportions required by your crop and land. His experience showed that they had paid handsomely on well selected crops. Would advise no man to buy chemical fertilizers unless he could buy intelligently, and apply intelligently.

Mr. Sanborn spoke without notes, but had the figures to back all his statement.

Covered and uncovered Manure.

Some years ago, says an experienced farmer, I had a lot of sheep wintered in a building and yard fenced in with high palings to keep out worthless curs. In the second story of the building hay was kept for the sheep, and fed to them under the building, which was open at one end, some six or seven feet high, into the yard where troughs were kept for feeding grain. During the winter manure accumulated under the building to twelve or fifteen inches in depth and extended gradually tapering to the ground, out into the yard. At the edge of the building the manure was about twelve inches deep. In the following autumn, when I went to haul out the manure for wheat, I found that immediately outside of the edge of the building, where exposed to the weather, it had rotted and sunk till it was only six inches deep, whilst that immediately under the shelter was still about a foot deep.

I took a cart and oxen and drew the manure which was on the outside of the building, and put it on a strip across the field intended for wheat, then drew out the same quantity in bulk from under the building, and put it in like manner on an adjoining strip of same size and quality. All was sowed with wheat of the same kind and at the same time. The crop from those two lands was not measured, but every one who examined the crop before cutting decided there was about twice the quantity on the land manured by the covered manure.—*Exchange*.

For the *Maryland Farmer*.

Delicious Grapes.

BLACK, WHITE AND RED VARIETIES.

BY R. H. HAINES.

The beautiful array of new fruits that have of recent years made their appearance, give promise of furnishing many a rich treat to amateurs and to others who are interested in fruits. It would be difficult to turn to a period in the history of horticulture, in which such marked progress has been made as has been the case during the past few years. Nor has the grape by any means been overlooked or over-shadowed in this race towards perfection of quality and beauty of appearance, as some of the most delicious and attractive looking clusters are among these recent arrivals. However, in describing them, I wish to call the attention of the reader to the fact that they are as yet new varieties, and that it will require the test of some years before we can ascertain how they will succeed generally throughout our lands. By that time, they will, however, no longer be novelties, and much of the pleasure of growing them will be lost to amateurs and other, who often find equally as much satisfaction in testing these varieties, as do those who are professional fruit growers. So the best I can do is to describe them as they appear in my own gardens or in the few localities where they have been grown.

Moore's Early, the unusually early time of ripening of this beautiful, large grape—sometimes two or three weeks earlier than the "Concord"—will obtain for it a very cordial welcome. Then its immense size—equaled only by the "Wilder" and a few others—will easily win for it a large share of the public favor. To show that I am not alone in my estimate of its value, I may mention here that that not long ago, the Massachusetts State Horticultural Society awarded it a prize of \$60, as being the "best new seedling." The vines have proved hardy, not requiring covering in this latitude and are of a vigorous and healthy habit of growth. The fruit is black, with a bluish tinge, and of a quality that seems to give very general satisfaction.

Lady.—This is perhaps the most popular white grape at present that I have growing in my garden. It also has the merit of ripening very early in the season, and the fact that it is a hardy *white* grape that can be grown out of doors as easily as the black varieties, is making it a great favorite. It certainly adds much to one's pleasure as well as to the appearance of the fruit—dish to have these beautiful white Lady clusters present, as besides

their delicious quality, they form a very pretty contrast when intermingled upon the table with grapes of other color.

Antoinette.—This is another new white grape and of extra large size. It is a seedling of the Concord—ripening at the same time, and partaking of its same strong and vigorous habits of growing. Brighton, Diana and Delaware are red varieties, whose fine qualities win for them many a cordial greeting. Belinda and Martha as white varieties, and Early Champion, Worden's and Linden among the black varieties, are all worthy of a description, but cannot be described at present.

And now a few words about planting. The grape can be grown much more easily than many persons suppose. Almost any soil that is suitable for garden vegetables will answer if not too wet. The planting of the grape is especially to be recommended for those who have but small gardens or city lots, as the vines running upwards upon trellises or along the fences, occupy but little ground room and scarcely interfere with currant bushes or other fruit that may be growing near at hand. A few vines will give a fine supply of fruit, and will begin to bear the second season after planting. The young vines have great vitality, as I have sent them safely through the mails to a distance of two to three thousand miles. Plant them out in March or April—placing them 8 to 10 feet apart. The first season allow only one shoot to grow. Later in the fall this should be cut back fully one-half. The following season two or three of the strongest shoots may be allowed to remain, and the vine will then be under full headway and in bearing condition.

Sangerties-on-Hudson, N. Y.

RYE VS. FODDER.—We give the following from a correspondent to the *Scientific Farmer*:

"In June number *Scientific Farmer* it is claimed rye will make as good fodder as oats, if cut when in blossom. I have used it for that purpose, but find it much better if cut as soon as the heads are out. It will mature a crop of grain after a hay crop is taken off as above."

Bradford Co., Pa.

F. S. CORNELL.

Last year Great Britain purchased \$124,000,000 worth of wool, in addition to what her own flocks produce; and after clothing her own people, exported \$115,000,000 worth of woolsens. We paid her \$20,000,000 for woollen fabrics.

Live Stock Register.

For the Maryland Farmer.

PARIS, JANUARY 20th, 1879.

Having left Birmingham by rail I soon reached the extensive salt works at Droitwich and the faithful city of Worcester, with its fine old Cathedral, proudly rising far above all other edifices. At such a season of the year, there is little of agricultural interest to note either by road or rail. From Worcester we quickly passed the fashionable and picturesque inland watering places, the three Malverns, and on emerging from a long tunnel, I found myself in the county of my ancestors, (Herefordshire) the home of the red with white face Hereford cattle. My travelling companion, Mr. Duckham had arranged that I should see Mr. Taylor's celebrated herd at Showle Court, whilst en-route to his house. We therefore stopped at Stoke Edith station in that fertile valley, the land of hops, cider and perry. The princely mansion of Lady Emily Foley was to our left, looking proudly over one of the finest domains in the Kingdom. A half hour's drive brought us to Mr. Taylor's hospitable house, and in close proximity to the far famed herd, many selections from which have been made at various times for exportation. Of course, the grand bull "Thoughtful" was a first object of attraction, and the recital of his royal and numerous other victories from his very successful owner formed an interesting episode.

"Thoughtful" is quite a mountain of flesh, and as he moved his majestic frame, he could not fail to impress the mind with his grandeur and the justice of his claims to the honors that have so frequently been awarded to him. Next to "Thoughtful" came "Empress" by his half brother Tredegar, another distinguished prize winner although only 18 months old. She is promising to go and do more next year. Time did not permit me to dwell as I could have wished, and thus I had to pass with a hasty glance the numerous other choice animals submitted to my notice. A few months since the Showle Court herd was very materially reduced by a large draft sale, and amongst other celebrities the prize winning and grand stock bull "Tredegar" passed to another owner for 260 guineas, but sufficient of his descendants were left behind to strongly impress me with his value as a sire amongst them, the beautiful heifer "Empress." A fine oil painting of him by Ganeil adorns the dining room at Showle Court, and it is said conveys a very faithful idea of the magnificent animal it represents

correctly, recording the £370 money prizes awarded to him during his various exhibits whilst in his breeders hands, including the champion prize as the best bull of any herd exhibited at the Craydon Meeting of the Bath and West of England Society, where he had a no less formidable competitor than "Sir Arthur Ingram," winner of the champion prize the subsequent year as the best Shorthorn bull exhibited at the Liverpool Meeting of the Royal Agricultural Society of England. It is here worthy of remark that "Sir Arthur Ingram" last year again unsuccessfully competed at the Oxford Meeting of the Bath and West of England Society against Mr. Rogers' bull, "Grateful," to whom was awarded the champion prize for the best bull of any breed exhibited; thus a double victory has been achieved by Hereford bulls over that celebrated animal, yet as a Shorthorn he has possibly won more prizes and of greater money value than any bull in England at the present day.

Again we struck the rail at Stoke Edith, and soon reached the ancient city of Hereford, which no longer displays the stony fortifications of by gone days, by which it resisted many determined assaults made by the ancient Britons on this border city, but its grand Norman Cathedral with its massive tower rises pre-eminently above all its surroundings, and appears to speak peace, good will towards all men. It is a truly magnificent pile of building, and has recently been restored with great taste and at a very considerable cost. Within its walls are many most interesting relics, amongst them the map of the world supposing the earth a fixed body, several memorial niches in its walls with effigies, some of which bear dates exceeding 800 years ago. A half hours run by rail down the valley of the Wye, I reached the picturesque Tower of Ron with its "heaven pointed spire" so ably immortalized by the English poet Pope. In an other half hour or so, I found myself comfortably seated in the dining room at Baysham Court, surrounded by a grand array of oil paintings and lithographs of numerous representations of the Baysham Court, and other celebrated herds Hereford cattle tastefully arranged round that fine old oak wainscotted room with its handsomely carved oak chimney piece and pannelled ceiling of the 15th century. Amongst the paintings were the celebrated short tailed cow "Countess," winner of a first Royal, at Bristol in 1842, and her son "Royal" which was similarly distinguished at that meeting. I may here remark it was gratifying to me to learn that my imported cow "Giantess" goes back on her dam's side in a direct line to "Reliance" by

"Royal, and my imported bull "Sir Richard 2d," upon his sire's side to "Young Royal the 2d" by "Royal." There hangs too, a painting by Gauei, of the handsome cow "Carlisle" with her thrice told first Royal victories, and her son "Commodore," winner of two first Royals and numerous other prizes, unfortunately the outbreak of cattle plague in England in 1866 stopped his further exhibits. In just opposition with each other are water colored drawings of the first prize ox of any breed at the first meeting of the Smithfield club 1799, and the gold medal ox of 1863—very forcibly indicating the progress made in the improvement of the herd during the intervening period. There is also a painting of "Victory," a prize winner at the Batterson meeting of the Royal Agricultural Society of England where only a few weeks too old to show in the younger class.

The Baysham Court herd suffered severely from foot and mouth disease in 1872, and subsequently many valuable animals proved barren and refused to breed which told very seriously for a time. The herd has now recovered its former position and contains many first class animals. The fine old stock bull "Helianthus," bred in Scotland by the Earl of Southesk, from the prize winning cow "Queen of Hearts," and by "King of the Lilies" whose dam was a first prize Royal winner, has done good service; his grand frame evenly covered with heavy flesh upon remarkably short legs rivetted my attention, he is alike active and docile, his character and style first class—it is necessary to limit his food in order to keep him from becoming too fat and heavy for use, as it is, he weighs 2,800 pounds. I selected one of his descendants to add to the Hayfield's herd, viz. "Prince of the Wye, his dam is "Venus 9th," by "Pearl Diver" winner of the first Royal prize as yearling bull at Wolverhampton, where he was purchased for Australia; the grand dam "Venus 9th" was by Challenge another Royal winner. He will be accompanied by "Winifred the 5th," although from the same herd she is of quite distinct blood, being descended from the same strain as the Batterson bull "Victory," and by "Concord" a son of the prize bull "Sir Capis Ball," and grand son of the renowned "Sir Benjamin." The dam of "Concord" is of the oldest tribe of the Baysham Court herd and of first class descent, which is clearly indicated by her grand frame and character.

Baysham Court is pleasantly situated upon an elevated spot on the banks of the Wye, the soil is a sandy loam upon the old red sand stone

formation, on which a very heavy stock of cattle and sheep are kept, all kinds of food being strickly economized in its use, yet everything looked healthy and well.

I had intended giving full account of my various visits in Herfordshire, but find already too much of your space will be required for this communication, and will continue in another letter.

Very truly yours,

JOHN MERRYMAN.

For the Maryland Farmer.

SHEEP HUSBANDRY.

If "variety is the spice of life," it is also sometimes considered the means of success or prosperity to the farmer. That is, that instead of following the cultivation of one or two different crops, there should be a variety in order to secure a higher degree of certainty of some returns. The rule that applies to the cultivation of crops, also applies to the growing of live stock; it is more satisfactory and more likely to insure favorable returns than if confined to one particular kind.

In the case of cultivated crops aside from other reasons, the fact that different plants feed differently upon the soil is a sufficient reason why they should be grown, and in succession, so as to favor the maintenance of fertility. Similarly there are substances for the sustenance of animal life that could best be appropriated by having a variety of kinds of animals to feed.

But enough of this; one of the kinds of animals that have ever held an important place in agricultural economy, except where adverse condition existed, is the sheep. In some sections of our country, the raising of sheep has been an important industry, for the wool and mutton that is furnished.

Some fifty years ago, New England generally, and Connecticut particularly, was somewhat noted for its sheep raising, and, it is said, that from this source, the farmer of that day looked largely for profits from his farm. Wool was then, and in now, an important element of trade. It must of necessity be very largely employed in all woolen manufactories, and if home production fails to supply the demand it must come from importation. But a law of political economy requires that, so far as possible, importation should be avoided and home industries of all kinds encouraged; and if one section of country is unequal to demand, another section should aid in the supply. Reference has been made only to the production of wool; this does not cover the

profit from sheep husbandry, but the rule above applies with equal force. Mutton is an exceedingly agreeable and healthy diet, which it were well for more of the people to understand. Rather than to take the chances of eating trichinae pork or that which is tainted with the hog cholera, thus contracting disease and perhaps occasioning death, let the people have an opportunity to feed upon the rich, juicy mutton, which is much less liable to diseases. Now with regard to New England or especially Connecticut, for reasons upon which farmers disagree, sheep husbandry has been gradually declining, and has at the present time an exceedingly feeble hold upon farming industries.

Very many towns have hardly any sheep at all, and the matter of mutton is hardly known. This necessitates a considerable change in the family economy. Now if the farmer wants a taste of fresh meat, he cannot go and kill a beef animal unless he has made arrangements for a sale of a considerable portion of the carcass; but with a good flock of sheep at command, he could butcher a single animal, and if his neighbors did not want a part, he would salt it down, which would be preferable to salt pork. Again in the small matter of woolen stockings, the family of the sheep raiser were supposed to be possessed of a supply of carded wool, which the good housewife would spin and knit into stockings and mittens for family use, and better still, knit many pairs for exchange for such dry goods as the necessities of the family required.

This was indirectly a source of means to the farmer, for in every case where an exchange was made, it was equivalent to so much money saved, and the same for whatever was used in the family, for it also avoided any expenditure of money in that line. Of course there have been gradual changes, an easy dropping off; in almost all cases where moderate flocks have had an existence, upon the farm the transformation has been gradual, occurring by a diminishing of the flock each year until finally resulting in its entire extinguishment. As before stated there are some legitimate reasons for the present condition of things, and yet it is somewhat questionable, whether taking all things into account, these reasons are sufficient to warrant the present practice in this direction, and its consideration will be continued in future articles.

Columbu, Conn.

WILLIAM H. YEOMANS.

Subscribe for the MARYLAND FARMER, only \$1 a year in advance.

For the Maryland Farmer.

QUEENSTOWN, QUEEN ANN'S C. FEB. 18, 1879.

Messrs. Editors.—Enclosed is an extract, cut from an adjoining county paper, published the early part of this month:

NUMBER ONE BEEF CATTLE.—The Easton Gazette says: "Dr. DeCourcy, of Wye Neck, Queen Anne's county, is the leading man on the Shore in raising beef cattle. Some of the very finest beeves that come to our market are grazed on the Doctor's magnificent farm, where he takes great pride in stock raising. His cattle are pure Herefords and grow to fine size. Mr. J. H. K. Shannahan, one of our butchers, deals heavily in this stock, and his stall is often graced by this splendid beef. On Monday last he received five head, weighing respectively 1,922, 1,700, 1,240, 1,230 and 1,220."

I should not think it worth while to call attention to the matter if there were not some facts connected with these animals which deserve mentioning. Their weights, though not sufficiently heavy to attract attention, yet when the circumstances connected with them are related, show a remarkable aptitude to take on fat, even under the most disadvantageous circumstances.

The two heaviest, weighing respectively 1,922 and 1,700 lbs, were a pair of work oxen, about eight years old. Whilst hauling in wheat, the latter part of last July, the heavier one became so completely overcome and prostrated by heat, as to render him almost unable for some time afterwards to crawl about to obtain sufficient pasture to sustain him, and consequently lost flesh to a large amount. When the cool weather of October approached, he began rapidly to improve on grass, and from the middle of November was fed on short corn. The second of December he was weighed and stalled—his weight then being 1,750 pounds—from that time he was fed on meal and clover hay, and weighed again on 26th of January, not quite fifty days, then weighing 1,922 pounds, a gain of nearly 3½ pounds per day. The other ox was not fed nor stalled until some time after the one above alluded to.

He was not so promising a feeder in the first instance, but his gain was very satisfactory. Though it was considered several hundred pounds additional could have been put on them, it was deemed advisable to sell at the time referred to.

The three lighter ones, each weighing upwards of 1,200 pounds, were three year old heifers, spayed when two years old, and had consumed but a small quantity of meal. These are not solitary instances of the ease with which these animals are readily turned into beef, when it becomes desirable to dispense with them for other purposes.

Respectfully,

WM. HENRY DECOURCY.

Working Mares when in Foal.

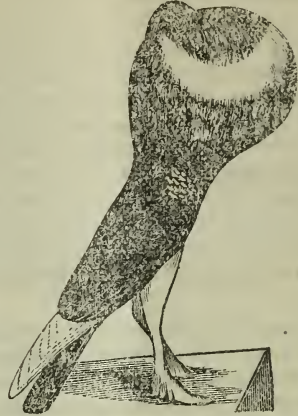
The writer's experience in working brood mares, while in foal, has been exceedingly valuable. Three road mares, all of which could trot faster than 2.40, were driven on the road within three months of their time of foaling, and in every instance they produced colts not only gifted with remarkable trotting action, but with great ambition to trot in the field after they became a few weeks old. The same mares, since they have been devoted exclusively to breeding, have not dropped foals equally gifted or desirous to trot, either in field or when broken to harness. The first great colt trotter—the celebrated Cora, who was sired by Neave's Clay, instead of Strader's Clay, as published by "Hark Comstock"—was the daughter of the celebrated roan mare Queen, that both before and after proving with foal, was used as a road mare. Cora, like a bright school girl, was talented from birth. After her dam was used exclusively for breeding, and never driven, she had five foals, yet none of them could trot in three minutes. Mark the history of the breeding of the gem of the Fearnought family! Galatia, with a record of 2.25½, as a four year old, was out of Grand Duchess, who was trotted continuously in the race through the grand circuit of Buffalo, Utica, Springfield and at Taunton, winning her record of 2.26½, after she had borne the weight of the future Galatia five months in her womb. Harry W. Genet, and many other historical trotters, will trace the secret of their speed to the same cause. It stands the test of reason. If the trotting brain and trotting muscles and trotting action are constantly stimulated, while the mare is carrying the foal, the formation and development and ambition must be impressed upon the growing fetus. I believe in the colt receiving its action and ambition from the dam, if her action and ambition are stimulated during the period of gestation by judicious driving. Trot the mare during pregnancy, and the colt will inevitably trot.—*S. Live Stock Journal*.

A Wonderful Stable.

THE FOREMOST COLLECTION OF TROTTING HORSES IN THE WORLD.

The greatest collection of road horses in the world belongs to Mr. Robert Bonner. There are now in his stable,, West Fifty-fifth street, near Fifth avenue, ten horses, every one of which, with a single exception, has trotted in 2.20 or better. Mr. Bonner is a man to be envied. In his town stable, he has ten 2.20 flyers, and at his farm he has a score or more which either have beaten 2.20 or give promise of doing so at an early day. His marvellous collection of trotters certainly makes him the foremost road rider of this or any other age.

PIGEON COLUMN.



THE POUTER PIGEON.

We paid a visit lately to the pigeon loft of the editor of the *Fanciers' Weekly*, and were charmed with the arrangements, which, though plain, simple and inexpensive, were very neat and all that seemed necessary for the comfort of the birds. There were fine specimens of Carriers, Barbs, Trumpeters, Fantails, Jacobins, Splashed (inside) Tumblers; Red Chekered, Blue Chequered, Silver and Dun Homing Antwerps. Among these were many premium birds. The Black Carriers were imported from Europe. The Black Barbs are a pair of Mr. Mordecai's best. The Homing Antwerps were bred by Van Opstal, Grist, Gaddess and F. L. Hooper—all famous pigeon amateur fanciers. Finer birds are to not be had in any lofts in the country than can be furnished by these gentlemen. But the pair our eyes rested with most pleasure upon, was the Russian Cock Trumpeter and his mate. This beautiful cock Trumpeter was imported from Russia at a cost of \$26.00 in gold two years ago. The Black Carriers are exquisitely beautiful, as indeed all were. No wonder that breeding fancy pigeons has such a fascination about it. We met here an enthusiastic, fascinating lady who seemed perfectly delighted, and exclaimed: "Can the coloring of these lovely birds be imitated by the greatest artists? Surely these birds would be a proper study for such artists as desire to approach the most delicate coloring of nature." The tinting of the feathers is exquisite and indescribable. The great wonder is why so few, comparatively, do not engage in rearing these most beautiful and harmless of pets. We could have spent hours in that loft, gazing with admiration

of first one and then another of these pigeons, and admiring their beauty of plumage, their peculiar characteristics of form, manners and winning ways; their gentleness and seeming trust in their visitors; their cooing graceful attention to their mates and the general grace of movements and kind bearing toward their companions. We left, thinking why it could be that any gentle woman or child should prefer a caged bird, a purring puss or a nasty, snapping lap-dog to these innocent doves, as pets.

PUBLICATIONS RECEIVED.

THE ENSILAGE OF MAIZE. By M. Auguste Gofart, of France. Translated and published by Mr. J. B. Brown of the New York Plow Company of N. Y. To which Mr. B. has added a History of the introduction of this art and its present condition in the United States. In the appendix to this volume is a letter from Mr. Francis Morris, of Howard Co., Md., who has successfully tested it on a large scale. Mr. Morris states in his letter that in 1877 he preserved by this method a quantity of fodder sufficient for 1,000 head of stock for over two months, and that in 1878 he had more than double the quantity of this fodder. The price of this book is \$1.00 and to be had postage free, of the translator at the above address. We have heretofore for years had in our columns articles upon this very important subject, and we would urge our dairymen and stock breeders and those who winter-feed cattle for beef to procure a copy of this book and put the theory in practice.

From Mr. T. B. PETERSON & BROS., Philadelphia, Pa., the new French Novel, "*Philomene's Marriages*." By Henry Grenville. With a preface to her American readers, in which she says:

"It has been said that I am a Russian, that my husband is a Russian, and that my education was Russian. Nothing is more untrue. I was born in Paris, where I was educated in the bosom of my family, and I married a Frenchman." Her novel is a picture of country home life, and is written with a desire to show that the French people "are a people whose sons respect their mothers, whose mothers sacrifice themselves for their children, whose husbands are devoted ones, and whose wives are courageous and loving exactly as they are elsewhere, no more so, perhaps, but not less so, than in other countries."

The heroine is a strange compound of the worst and most foolish traits that are found in some few women in every clime, while the character of a pure, angelic girl is admirably depicted

in Virginia. It is a pleasant story, full of cleverness and wit, published in a large square duodecimo volume, paper cover. Price, 75 cents.

From RAND, McNALLY & Co., Indexed Maps of Virginia and West Virginia; also of Maryland, District Columbia and Delaware. These Maps are of much value to every body who is interested in geographical knowledge, but are particularly useful to merchants, newspapermen and travelers. Price, 50 cents per copy.

HOW WE SAVED THE OLD FARM, AND HOW IT BECAME A NEW FARM. Loring, publisher, Boston. Price, 50 cents. This unpretentious little book is one of the most instructive, practical and highly interesting books on the subject of making farming pay, we ever had the pleasure to read. It really would be a treasure to every young farmer in the country. The plain ideas therein found, if practiced upon, would go far to revive the spirits and foster the welfare of every young farmer who may be encountering debt and despairing of ever making a fortune by farming. Young men buy it, study it and then blame us if you do not truly think it worth twenty times its cost and more.

HOUSE HOLD AND FARM CYCLOPEDIA:—From the author D. R. Shafer, A. M., Anchor Publishing House St. Louis, Mo. This is a large volume of 600 pages well illustrated, and filled with useful facts, statistics, receipts, forms of Law—papers &c. which altogether makes a store-house of useful matter for reference, that the farmer, land owner, house-keeper and most all others engaged in the every day avocations of life, wish frequently information about; the diseases of animals are treated upon largely, and there are many useful recipes relating to house-hold matters. We commend it to our readers as an excellent book to possess, which will often be of great service, particularly in cases of emergency.

SALE OF SOUTHDOWN SHEEP.—The Druid Hill Park Commission of Baltimore has lately sold to the *Fairmount Park* Commission of Philadelphia, 40 ewes and 1 ram, from the splendid Druid Hill Park flock of Southdowns, for \$1,000. This is a large sale, and at a good but not extravagant price for such superior sheep. This sale is encouraging to sheep breeders, and especially so to those who breed superior mutton sheep. There is more money in breeding high bred sheep with the proper care and attention they deserve, than in raising any other class of domestic animals, we have long believed and for years urged our stock breeders embark largely into it.

THE MARYLAND FARMER,

A STANDARD MAGAZINE.

DEVOTED TO

Agriculture, Horticulture & Rural Economy.
EZRA WHITMAN,
Editor.

COL. W. W. W. BOWIE, Associate Editor.

141 West Pratt Street
BALTIMORE.

BALTIMORE, MARCH 1, 1879.

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
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
The large circulation of the Maryland Farmer makes it one of the best mediums for advertisers of all classes. Its circulation will be largely increased by our reduction in the Subscription Price, and hence add to its advantages as a medium for advertisers. The terms of advertising will remain as heretofore.

The Maryland Farmer will be read this year by more Farmers, Planters, Merchants, Mechanics and others interested in Agriculture, than any other magazine which circulates in the Middle or Southern States, and therefore is the best medium for advertisers who desire to extend their sales in this territory.

 We call attention to our Reduction in Price of Subscription.

DR. KENDALL's valuable little book on the horse and his diseases, can be had at our office or sent by mail on payment of 25 cents.

 We regret we could not supply the demand for our issue of the February number. All the extra numbers of the edition were soon exhausted, at our office. This number of our issue of the MARYLAND FARMER will be increased fully 15 per cent over that of February.

 Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

YOUNG MEN!

It is an easy way to make money by getting subscribers for THE MARYLAND FARMER. Send to cents for Specimen Copies, and ascertain what Liberal Commissions we will allow.

The Attack of the American Farmer.

We replied in our last number very hastily to the gross personal attack upon us by the *American Farmer*, which was wholly unprovoked on our part. We do not desire to insert in our columns anything that may be distasteful to our readers, but feel sure that no one can object to our defending ourselves when rudely assaulted; we therefore have only a few words to say further in rejoinder on this subject.

We took no notice in the February number of the libellous misrepresentations made as to the indebtedness of the MARYLAND FARMER by falsifying the record and by other malicious misstatements, which will have proper attention in due time. His over-eagerness to abuse us or our Journal has blinded his caution, and makes out as clear a case of outrageous *libel* as a man could possibly convict himself of.

This would-be *American Farmer* which has died so often, is now struggling for existence, and crazed with malice and envy against a prosperous rival. In its December number it says "the *American Farmer* is not only the sole agricultural periodical in the State which is published without having for its object the furtherance of private ends and business enterprises, (this is a deliberate falsehood), but absolutely the only one, agricultural or secular, which serves in any way as a means of communication between the various divisions of the Order in the State, as a chronicler of their doings, &c." This is a slander upon the daily and weekly papers en-masse, who in common with the MARYLAND FARMER have often given reports of proceedings of the several Granges, and we, of the MARYLAND FARMER have not only addressed Grange Meetings, but have always held our columns open for their use and have often reported their proceedings, but have not become members, not wishing to have our motives misconstrued. By thus toadying to the Grangers, some of these good men have compassionately recommended their brothers to give it patronage, which aid, with the boasted "ample competence" of the Senior editor may keep life in it a little longer if its unruly passion does not some day destroy itself with its own venom.

Mr. Sands seems much worried that our "great success" should enable us to be liberal and reduce the price of our paper to suit the times. To enable us to make this reduction, we relied upon increased patronage because of the merit and high character of our Journal. But it would be different, if we were sailing under false colors, and were publishing a Journal which had once

flourished, died and was buried for years, and endeavor to gain patronage under the prestige of a name at one time illustrious. The present *American Farmer* is no more a continuation of the *American Farmer* established in 1819, by that eminent Agricultural writer, John S. Skinner — than would a political paper started now by some reckless politician, under the name of the "*The National Intelligencer*, established in 1790," be a legitimate successor of that old newspaper of world wide renown.

Let us mention a few facts about Mr. Sands' connection with the old and the present *American Farmer*: The Old *American Farmer*—the Journal edited and published by J. S. Skinner, was first issued in 1819. It was a folio, issued weekly. In 1830, Mr Skinner parted with his interest in it to J. Irving Hitchcock, and Dr. Gideon B. Smith, of Baltimore, became its editor. It was continued by these parties until 1833, when it ceased to exist. Thus ended the *Old American Farmer*. This fact is made apparent by the announcement of another Journal, then started, whose advertisement speaks of it as the *late American Farmer*, thus showing it was dead. This was a weekly folio form, called "The *Farmer and Gardner*, whose editor was Mr. Edward P. Roberts. This new Agricultural Journal lasted about five years when it terminated its brief career. During these five years there was no such paper printed as the "*American Farmer*. In July 1838, Mr. Sands for the first time, issued a weekly, in folio form, and called it the "*American Farmer*." In 1845, the publisher changed his weekly folio into a monthly octavo of thirty-two pages.

In 1855 Mr. Sands sold a half interest in this paper, and the other half in 1858. Mr. Sands avers that he sold the Farmer for \$14,000, but in this, as in regard to other things, he states as facts, his memory is sadly at fault, as we happen to know he sold it along with the interest in the Guano and other agency business connection with it and the most valuable part of the concern, for only \$13,000.

Very soon after he had parted with all right to the so-called *American Farmer*, new series, for so large a sum, we find Mr. Sands starting a new Paper in opposition, called "*The Rural Register*," which became defunct in 1861, as did also its rival.

In January 1872—14 years after he sold out his interest in the "so-called" *American Farmer*, Mr. Sands appears again, after a long absence from public view, and commences a journal, which again he calls "THE *American Farmer*, established 1819." And thus ushers this new born bantling into the world, as if it really had a claim of paternity upon that great editor, the late John S. Skinner, when

in fact Mr. Sands had nothing to do with the *true American Farmer*. During the sixty years which have elapsed since Mr. Skinner founded it, he, Mr. Sands, for 33 years of that time, has been either unknown to its readers, or been antagonistic to the paper called "*American Farmer*."

We ask, what right has Mr. Sands, under this state of facts, to claim the mantle of John S. Skinner? No doubt many persons who subscribe for the "*American Farmer* established in 1819," are impressed with its antiquity and suppose that it is an old, continuous publication.

As proof of this inference, we find in the February number of this "veracious" journal, a "Lecturer," who congratulated the editors that the *American Farmer* has attained its three score years, and goes on to make a close calculation showing that in that time it had written and printed "*thirty-three and three quarters millions of words*" of instruction for farmers, and Mr. Sands complacently endorses this deceptive, ridiculous statement by saying "its total contributions to agricultural literature are *doubtless much greater* than our friend figures up."

They little suspect that the *American Farmer proper*, lasted only 14 years and then died—that it is only *now* a paper under the same name, which has changed owners often, and had many long last sleeps, and is at present published by one who has been one of its bitterest enemies in the past. Well might the *old American Farmer*, if it could rise from its grave and give itself utterance, exclaim "*Save me from my friends!*"

We are much gratified to have had so general an expression of approval by our readers, of our course in regard to this, *unsought on our part*, personal controversy. Both personally and in writing we have been assured that we are sustained and our adversary condemned; among those who have *written*, we select the following from a gentleman of high standing and well known over the state;

"THE CONTROVERSY."

"*Editors of Maryland Farmer:*

From the character of Mr. Sand's last contribution to his controversy with the MARYLAND FARMER, it seems plain that he has set no limit to the means he may resort to, to gratify an angry temper. If he may get your mail bags weighed to ascertain the number of papers you mail, and may drag out into publicity whatsoever of your private affairs may seem to answer his purposes, what should hinder his sending a spy into your kitchen, and that he should publish in the *American Farmer* such tattle as your domestics may furnish him,

as good reasons why the *Maryland Farmer* should not any longer come into competition with his own journal. As you do not propose to adopt this sort of warfare, I suggest that there is good reason to let the whole matter drop.

As I understand it, Mr. Sands began his discussion by a discourteous, not to say insulting, allusion to the *Maryland Farmer* and its editors, because, in the historical sketch of the State Agricultural Society, they failed to do justice to his idea of his own merits, and the part he took in the inauguration of that Society.

Those who know how it is with old soldiers, and how a good story naturally improves as it grows older, will rather think that in the long time since that occurrence, Mr. Sands had been fighting his little battles of life over again in his own mind and so this and other such things have come to take the form in which his imaginative mind has dressed them.

Your retort as to Col. Mills was apt and deserved. The complacent avowal of "a competency ample for our support," would have been received with much more forbearance, had that "ample competency" served also to give help in his need to one connected with him by family ties and long business association, when he came ruined from a government prison, and who was every way worthy of help, *politics only excepted*. Happily for Col. Mills, when he ceased to be "the nephew of his uncle," he came to be the man he really was, and public trusts and public honors, in his life and his death, bore witness to his merits and the hold he had upon men's hearts.

LOOKER ON."

We thank our correspondent for his advice, and will follow it unless we are again forced to defend ourselves against other insidious and malevolent attacks. No *honest* man will object to our willingness to repel as far as we are able, all assaults, especially those that are so ingeniously made that not to answer them, would seem as if we were conscious of some guilt in the charges insinuated.

A LARGE CATTLE SALE.—At Herkness's stables Philadelphia, on Tuesday, forty-one finely-bred Jersey, Guernsey and Ayrshire cattle were sold at auction for an aggregate of about \$6,000, the prices realized being generally quite low. Among the buyers was Mr. John Ridgely, of Hampton. Baltimore county, Md, who secured the Jersey heifer Derby, dropped May, 1877, dam Buttercup, sire Brutus, for \$330. Mr. J. T. Phillips, of Baltimore county, was also present at the sale.

THE DAIRY.

The Great International Dairy Fair.

We conclude our extracts from Mr. F. D. Moulton's Address on that occasion.

IMPORTANCE OF THIS INDUSTRY.

It is difficult to overestimate what would be the result in money value to this country of the care which would produce the best cows, giving the largest yield of milk, for the manufacture of the greatest quantity, and finest quality, of butter and cheese. During the past year I visited, in Illinois, Mr. Israel Boies, a pioneer of the creamery system in the West. He told me that when he lived in Cortland County, a leading dairy district in this State, the highest yield of butter per cow per annum was two hundred (200) pounds, and the average only one hundred and twenty pounds; but that in 1874 he had obtained a yield from his dairy of 100 cows, 314½ lbs. per cow. The standard which he is now trying to reach is 400 lbs. If the intelligence and care of Mr. Boies were applied, universally, throughout the dairying sections of the country, millions of dollars would be added to its wealth yearly. I heard Mr. John Stewart, of Manchester, read in Chicago, before a convention of dairymen, a paper contrasting the creamery system with the farm dairy mode of making butter, and showing conclusively that, at the end of the ten years, 20 men owning thirty cows each, would, under the creamery system, have realized \$179,000 more than under the system of private dairying. The money value of the substitution of the one method for the other is amazing. It represents the difference between apathy and enterprise, depression and prosperity."

* * * * *

NECESSITY FOR HONEST INDUSTRIES.

One of the leading newspapers of the country said a few mornings since. "There is nothing of better import to the country than financially prosperous farming. It is money making without many of the evils which accompany some other methods of making money. It is cleanly, honest, and of all good influences. So it always had been; and so may it ever be."

It is true that nothing is of better import to the country than financially prosperous farming. It is still more true that nothing is so essential to the prosperity of this city and to the solvency of its merchants. Because the industry which we represent is cleanly, honest, and of all good influences, we advocate helping it to the utmost development on behalf of humanity, believing, with Sully, that

tillage and pasturage are the breasts of the State. Let us hope that we are not far removed from the time when our merchants, appealed to in its favor shall feel as the Roman poet did when he uttered these sublime words: *Homo sum, humani nihil a me alienum puto*. "I am a man, and therefore am interested in all that concerns humanity." For my own part, I am glad to have been identified, with the industry which this Fair represents. I am glad that I know so many of the men whose enterprise, intelligence, and unselfishness, have helped to develop it. However inadequate my words or my influence to do the good I would, I have spoken out of the right spirit, and am content, since "In the economy of God no effort, however small, put forth for the right cause, fails of its effect; no voice, however feebly lifted up for truth, ever dies amidst the confusing noises of time."

THE DAIRY STOCK AT THIS FAIR.

There was a fine display of thoroughbred milch cows. One cow is a famous milker, named Josephine. She is a pure Jersey, seven years old, American bred, is owned by William Crozier, of Northpoint, Long Island, and won the first prize at the Elmira Show in 1878. She gives 12 quarts of milk a day, and has made 14½ pounds of butter a week on an average for three months.

Gen'l B. F. Butler, in his speech at this fair, among other good things, said: "England bought of the United States in 1876, \$15,789,000 worth of cheese and butter, and the same year bought from France \$18,672,000 only. The French farmers are too practical to allow their cows to browse around bare pastures, until their milk produces no butter, but cheese alone; and besides France eats most of her cheese herself."

PATAPSCO DAIRYMEN'S ASSOCIATION:—This association held its third monthly meeting at Sykesville, Md. on the 22nd Feb., with President John H. Herbert in the chair. From many encouraging letters read, the members were unanimously of the opinion that during April next a convention would be called, resulting in organizing a "State Dairy Association." We trust that such may be the result of these laudable expectations. A committee was appointed to urge upon the Mayor and Council of Baltimore, the importance of, milk inspection. This association now includes with very few exceptions, the whole milk producing interest on the line of the Baltimore and Ohio rail road.

Discontinue the practice of breeding from scrub males. A thoroughbred increases value more than fifty per cent.

Treatment of Calving Heifers and Calves.

An enthusiastic beginner in Jersey breeding asks the following: "As my Jersey heifers are springing very fast, I thought I would consult you as to the raising of the calves—whether I should leave them with the heifer until her bag is in good condition (that is if it should get hard and feverish), or take them away and feed on skimmed milk, as I was told had to be done with all Jersey stock. I take the liberty of asking you (as you have been among this kind of stock and seen them raised) before any calves are dropped, so I will know just what to do." In the first place your care should begin before calving. Do not allow the heifers to run with older animals, for fear of accident from "bullying;" give them all the fresh air and sunlight you can; keep them from damp land, and while keeping them in thrifty condition be careful that they do not get too fat. Let the first calf suck at least ten days, and until the bag becomes thoroughly soft. It will be well to milk the heifer dry three times a day so that the calf shall have to work for his living. If the teats are small it is a good plan to leave the calf on her for a month or more until they are well developed. The calf must be changed from new milk to skim milk very gradually. First teach it to drink fresh milk, then add a little skim milk—more and more every day. If the quantity is increased too rapidly the calf may scour. The remedy for this is to decrease the proportion of skim milk.—*Bulletin of Jersey Cattle.*

BRISCOE RUN, WOOD COUNTY, W. VA.

For cows giving lumpy or bloody milk, give saltpeter, a tablespoonful, once a day for three days. If it does not cure, repeat the same in a week. I have tried this remedy for years.—*Cincinnati Enquirer.*

For the Maryland Farmer.

Agricultural Statistics and Prospects.

Messrs. Editors:—When the con-current resolution for the promotion of Agriculture was before the Senate, some days ago, Senator Davis of West Virginia, brought out some interesting facts, which I condense for your disposal. There are about fifteen millions of males in the United States over ten years of age. About one half are engaged in Agriculture. The value of farms and property amounts to \$11,124,959,037. There was last year a balance in favor of our exports of \$309,309,741. On 3,603,884 square miles, containing 2,000,000,000 acres of land, we can support many hundred millions, where we now have but 45,000,000 or 13 persons to the square mile. France now feeds 182; Belgium, 469; Germany, 200; Great Britain, 268. He directs our attention to the fact that farmers are paying an average duty upon necessary articles of 42½ per cent. From tobacco and liquors, we get an internal revenue of \$110,459,622,25. This is almost the entire revenue and it comes

from the South and West. He alluded also to the fact that the general appropriations for agriculture in the United States, is much smaller than any European country, and infinitely smaller than any of the other departments of our own country, amounting to only \$204,930, whilst the others run to many millions.

The salaries of officers in the agricultural departments of our government receive but \$1,900 whilst others run from \$3,000 to \$6,000. The other committees of the Senate have from seven to nine members; the committee of agriculture has only five.

Whilst our exports exceed our imports, yet we paid last year \$77,000,000, for foreign sugars and molasses. Senator Davis thinks we ought to expend a portion of this enormous outlay in building up the agricultural wealth of our Southern States; in restoring the swamps of the Mississippi and the rich arable lands of that valley, so as to enable us to produce enough for home consumption. The present sugar crop of Louisiana is 200,000,000 lbs. We even import eggs, and last year, paid out therefore the sum of \$726,020.30.

One item of wool, with duty amounts to \$9,709,762, and yet our law makers fail to guard this home interest by banishing the sheep's greatest enemy, the dog.

Our tobacco and cigars run up to \$6,000,000; our wines, \$4,000,000 barley, \$4,000,000. The sum total of last year's imports, reach \$210,908,125, upon which the duty alone is over \$50,000,000.

From 1860 to 1873, we paid out \$439,087,737 more for imports than we received for exports. From 1873 to 1878, we exported \$659,072,791 more than we imported. That this winding on may continue, the hope is expressed that the con-current resolution, just passed by the Senate, may relieve us of many of the burdens enumerated above, and place our country among the foremost in building up the bone and sinew of our land.

Respectfully, J. D. WARFIELD.

THE SOUTHERN LIVE STOCK JOURNAL, is a welcome weekly visitor to this office. It is published at Starkville, Mississippi, and is the only paper specially devoted to grasses, stock, &c., published south of Kentucky. To any one who desires to become more familiar with the Gulf States, as a suitable section for grass culture and Stock breeding, we recommend them to give the Journal a trial. The subscription price has recently been reduced from \$2 to \$1.50. Write for specimen copies to E. Montgomery, editor and proprietor, Starkville, Mississippi.

THE LATE EDWARD WILKINS.

At the last meeting of the Potomac Fruit Growers Association, the following appreciative resolution was adopted, on motion of its Secretary, J. E. Snodgrass:

Resolved, That this Association recognizes in the death of Edward Wilkins no common loss to the great interest to which he so extensively and successfully devoted his means and his energies. As the largest peach grower in the South, if not, indeed, in the whole country, his success has furnished an inspiration whose beneficent influence will, as it should, long survive him.

The Poultry House.

For the Maryland Farmer.

Messrs. Editors :—In compliance with your request, I present to you an article on ducks, for your March issue; and hope that both you and your readers, will make charitable allowance, if it should prove both unprofitable and uninteresting; for the tame duck is a very tough subject to deal with, and especially hard for me to sound his praises, as I like him neither on the table nor in the yard; and am not at all of Cowslips taste, when Lingo addresses her as follows: "oh Cowslip if you were a Goddess! Jove loved an eagle; Mars a lion; Phœbus a cock Venus a pigeon; Minerva loved an owl."

Replies Cowslip:—"I, should not have thought of your cock-lions, your owls, and your pigeons; if I was a Goddess, give me a roast duck." But let us for her sake suppose that she meant a wild duck,—say a canvass-back, and had never tried an old puddle duck. There is very little said, in ancient writings, about the duck, and from best information we are led to believe that very few if any ducks, were domesticated in Europe as early as during the existence of the Roman Empire, as we find mention only of the wild duck—and also mention made during that time, of instruction for building a duckery, as a curiosity; the walls of which were to be fifteen to twenty feet high, and the roof to be covered with netting, to prevent the ducks from flying out, and to protect the ducks from eagles and hawks. Later on, in countries, of Europe, mention is made of collecting the eggs of wild ducks—and hatching them, in this way domesticating them with comparatively satisfactory results, and also accounts of efforts made to domesticate both young and old wild ducks with very unsatisfactory results, showing that it was almost invariably necessary to hatch the eggs. It is very generally conceded that the many varieties of com-

mon ducks are of recent origin, and derived from eggs of wild ducks, but at the same time, we have some varieties that differ so widely from these in markings and habits, as to strongly support the supposition that there has long existed in China and the East, special breeds of domesticated ducks; and also early voyagers to the East Indies, mention that the tame fowls are ducks, &c. The chief point of difference, and the one which is claimed as the mark of distinction of these Eastern tame ducks, is that their legs and feet are yellow, whilst nearly every individual descendant of the wild duck has dark legs, feet and nails—another very strong support of the theory that the East and probably—China—is entitled to the claim of being the native land of the yellow legged duck, is this that it seems to have been a study with the "heathen Chinese"—to produce yellow flesh in their fowls, and all of their most valuable breeds have this peculiarity, whilst the favorite breeds of Europe, have blue or black legs; now assuming it to be acknowledged that yellow legged fowls have strongest proofs of being the earliest domesticated, and it being an established fact, that China has the peculiarity more permanently established in her fowls, than any other country, it is a very reasonable conclusion to arrive at, that China is the earliest fowl raiser of the world, and is also the home of the yellow legged duck. The favorite duck in this country is the Aylesbury—which is large, white, with yellow feet and legs, and with flesh colored bill. The Pekin Duck has lately attracted much attention, and whilst I recognize it to be a very highly improved duck, I am ignorant as to how it differs, except in a new name, from an old and valued breed, so will keep silent about them until I am better informed. The white Call Duck, which can be traced to Holland, is small and with yellow feet, and legs and bill of yellow orange color, it has no special value, and only peculiar on account of its constant call or loquacity which makes it useful sometimes as a decoy for wild ducks. The Rouen Duck which has some reputation when of improved strains, must be placed on the list of common ducks, or those of recognized modern domestication, as they have the wild duck markings.

The Musk or Muscovy Duck as it is commonly called, when of improved strain is also valued by some, but chiefly for its size, this also I cant find a place for, except in the list of common ducks. The Black East India duck (called also, Labrador, Buenos Ayres, and Beaver duck) is very pretty, should be pure black, feet and legs also black, bill black with under shade of green. The neck, back, and also larger feathers of wing and tail of the

male's are beautified with metallic green, with subdued traces of the same in the females. The Penguin duck is only peculiar for its imitation of the Penguin, in walking uprightly.

Duck raising is not very profitable, they usually commence laying in Feb. or March, and lay three months very well, and averaging during the year about 90 eggs if well treated, but as eggs are usually cheapest at that season of the year, there is no profit from them. The only way to make duck culture profitable is in raising young ducks, which mature rapidly and can usually be sold at profit over cost of raising. It is advisable for those who wish to raise ducks for market, never to keep any during winter; buy about the tenth of Feb. breeding stock, and sell every duck young and old before the middle of Sept. It is best to set the eggs under hens or turkeys; the young ducks should be kept from going into the water until 10 days old, as they are not supplied when very young, with the oil which protects the older ones, feed on soft food, bread soaked in milk is excellent. For profit in raising for market, any large strain of common duck can be selected, and the young ones should be sent to market when three quarters grown. For private use, fancy breeding, and the show pen, and when breeders wish to raise and keep their own breeding stock, the Aylesbury and Pekin are the most valuable and beautiful,

W. S. TEMPLE,

47 S. Howard St.

PURE-BRED POULTRY.

BY D. Z. EVANS JR.

It is really very amusing to see how eager some of our farmers are to cry down pure bred poultry, and to say all they can against it. When we first moved to Maryland, several years ago, we took some of our choice poultry with us, and endeavored to awaken an interest in our section, in pure-bred stock. Many were the criticisms we were subjected to, and one person in particular seemed to be laboring with all his strength to convince us that it was no good, "those new fangled birds." We let things take their natural course, for argument was of no avail, until one bright June morn, one of Mr. B's children sought us out, with a basket on her arm. We inquired her errand, when she told us "Pop sent me over to trade some of his eggs for some of yours." She wanted a dozen and had just that number in her basket. Now, we always did admire assurance, but this was the most refreshing piece we ever witnessed, up to that time, and for a while, we stood still with amaze-

ment. We always like to accommodate our neighbors in any reasonable manner, but we had to send the little one back with the contents of her basket intact. Of course Mr. B. thought us very mean, and said so, but we distinctly remember he bought some of our birds in the fall, and we made him pay well for his meanness.

There are many who condemn pure bred poultry, either for the purpose of getting it at low prices or because they are too mean to buy it. They are, these self same mean ones, very willing, we found, to accept of them as a present. That there has been a great and very decided improvement made in poultry, through the untiring exertions of breeders and farmers, we all well know, and he who is enterprising and has an eye to profit, will not fail to keep them instead of the common dung hill fowl. The many different breeds have been so widely scattered over the country, it is not difficult to obtain a flock of really good birds, at moderate prices, in almost all sections, so there should be no excuse for continuing to breed the common birds.

If entire flocks of pure bred birds cannot be gotten, buy a pair or trio of them, and in one season will have a good sized breeding yard for the following season. If you cannot well do this, infuse the desirable and profitable blood of the pure bred ones into your flock by the introduction of males from that breed which seems to answer to the qualities you desire to introduce and perpetuate. If you want larger size, being derisive of having heavy birds for market purposes in the fall, select cocks or cockerels from the Light Brahmas or the Partridge Cochins, either of which will serve your purposes well. If your object be eggs, then go for the Brown Leghorns, the White Leghorns, the Houdans, the Hamburgs or Games, and you will find them satisfactory.

It costs no more, not a penny, to breed choice thoroughbred poultry than it does to breed common ones, and the receipts are invariably more gratifying. True, the first cost is somewhat more, but this is more than counterbalanced by the profits. Aside from this, you can usually dispose of the best of your surplus birds as breeders, at an advance on the regular market prices, which is still another argument in their favor. If you intend to breed pure bred fowls and have, as yet, no especial favorites, permit us to suggest to you, to look closely to the merits of the Plymouth Rocks, which we think are "the coming fowl."

The annual production of milk by Patapsco Dairy Association of Howard county, for 1878 was 200,000 gallons, all of which is sold in Baltimore city.

Preserving Green Forage Crops.

ELLCOTT CITY, Feb'y 15, 1879.

Editors of the Maryland Farmer.—My letter, as published in the book entitled "The Ensilage of Maize," is general, as to what I have done in past years in preserving corn fodder and its use. Any land which will yield forty bushels of shelled corn to the acre, will yield twenty-five tons of fodder per acre, sowed in drills three feet apart, and a bushel of corn to the acre—it should be worked two or three times and cut when in tassels. The corn I have cut with an old mowing machine, carried it fresh cut to a feed cutter, it should be cut up in half-inch pieces, buried in trenches in dry ground, protected by straw and then covered over with at least two feet of earth or clay, which must be kept carefully packed upon the fodder. If the trench or silos are six feet deep and six feet wide they will be handy to fill and empty. The pressure on the fodder should be increased, if possible, by putting boards crosswise on the fodder, and by weighting the boards with stones or any other heavy material. The object always to be attained is to keep the air from the fodder, which will cause fermentation and decay. An acre of corn fodder will keep two milking cows a year, summer and winter, without any other feed, and will give better milk and butter than can be obtained any other way.

Sixty pounds of corn fodder is good feed for a cow, which is a little less than eleven tons per year; and two cows can be fed on an acre, with an amount of labor so small that any mechanic or laboring man can take care of his crop with the same amount of labor he bestows upon his potato patch. This will give him all the milk and butter he can require—two calves per year for the butcher and a couple of pigs from the butter-milk. The land manured by the cows will each year give a larger crop of fodder and increase in fertility. In putting away the fodder a little salt may be used, but it can be preserved without it.

The use of ensilage is an entire change of the agriculture of this State; one-tenth of the arable land of the State should be used on green crop preserved as heretofore described. This will be done in a few years from this time, and the amount of cattle and sheep raised will be far beyond all present calculation; and as a result, farms that will not pay for cultivation at this time will be largely productive. Every farmer should, this coming season, say on or before the first of July, drill in one, two, three or five acres of corn, and put some small portion of it in trenches for winter feed. Feed the balance to his stock, and if he

does this once, he will never be without it again. It will be ready to put in the trenches on the first of September, by which time it will be in tassel.

In the general distress which extends to all of our large cities there are thousands of industrious hard-working men who would leave the cities and go to the country if the could be assured of the produce which a couple of cows give them, and it only remains for this knowledge to be given to our people to produce the greatest change in their wordly situation that time has given us a record of. How few families in poor circumstances in our cities ever get any good milk? and how impossible it is to raise a hearty, strong people on any other food.

F. MORRIS.

[The above will be read with great interest by our farmers, we are sure, and we feel under obligation to our esteemed correspondent for the important information he has given.]

A FINE BEEF RAISED IN PRINCE GEORGE'S CO., MD.—The *Marlboro' Gazette*, says:

"Mr. Jeremiah Ryon, of Nottingham, sold a beef steer in Washington of his own raising, which weighed 1,976 pounds. It netted him \$88.65, or 4½ cents per pound on the hoof. If our farmers would follow this example and turn their attention more to cattle raising than they have done heretofore, we believe they would make more money than under the present system of cropping."

We heartily endorse the judicious comments of our editorial brother, and hope that the planters of Prince Georges and others in this entire section of country will be induced by the example of Mr. Ryon to breed and fatten more stock, so as to consume all their hay and grain, except wheat, on their own farms and create each for himself a home market for all these materials, thereby getting better prices at their own doors and returning to the land in manure what it produced. In this way the natural fertility of the soil, will be more than restored, and worn-out soils will soon produce abundantly.

A sensible, rational and successful method of treating Catarrh and Consumption by the use of M. W. Case's Carbolate of Tar Inhalant is becoming deservedly popular throughout the country. Physicians who have made lung and throat complaints their specialty for years say that there is no remedy equal to Dr. Case's Carbolate of Tar Inhalant. We advise invalids to write to the Doctor for full particulars of his methods of treatment. See advertisement in this number of the MD. FAR.

THE APIARY.

For the Maryland Farmer.

CHARLOTTESVILLE, VA. Feb. 15th, 1878.

Perhaps it will be best at this point to describe the process of transferring bees from common box hives to the frame hives.

It is a very simple process, but to become expert at it, and be able to do it well is no small accomplishment, indeed it will prove of very great value, and worth the trouble of acquirement.

The instinct of the bees, to gorge themselves with honey when alarmed, makes it comparatively safe to tear their home all to pieces in broad day light and out of doors. But every bee keeper ought to have some kind of a smoker. A long experience causes me to say, that a bellows smoker to burn rotten wood is the most effective and the cheapest thing to buy. Still a smudge pan, with chips or a roll of cotton say, makes a smudge that will do. The most refractory bees can be quickly subdued with smoke. The practical tobacco smoker can with a few whiffs accomplish the object.

The smoker; a long thin knife, a hand-saw and hatchet, are the tools needed in transferring. The best time is during apple bloom, though it may be done later. But the earlier it be done, the sooner can the new made home be prepared for the inflow of honey, by filling up with young bees. Right here I will say, that every apiary ought to have a room of some kind, if it be no more than six feet square, in which extracting may be done and transferring out of the way of bees to prevent robbery and annoyance, when necessary to retire. Transferring is best done out of doors, and where bloom is plentiful bees will not annoy. Such a room must be made tight so that bees can be shut out. My own has two revolving windows, one on each side. Single sash being on pivots, so that bees alighting on the inside, are by turning it just out of doors in a moment.

Get a table or bench and place conveniently—I like it near the hive—take the box hive, and after blowing a little smoke into it turn it over, run the saw down on at least two sides, to cut the comb connections. Split or knock off one or two of the sides as may be necessary to get at the combs, with a knife, sever the top connections and take out a comb, brushing back the bees into the old hive. Lay over the comb the frame that is to be used, and mark on its shape with the knife and cut it accordingly. As old combs are often miss-shapen and curved, and with all,

often have too much drone comb; care must be taken to flatten out and straighten all that can be made so, and if necessary, cut and patch in pieces—A sharp knife, kept clean, and wetted in soap-suds, often will cut clean and square—Every piece of sound good comb should be saved.

Fitting pieces in nicely, makes it easier to hold in place. As bees start brood very early, it will be found in all good colonies, and all should be saved. To prevent injuring, a soft mat of a few thickness of cloth, should be placed under the comb operated on. Sometimes a comb will fill a Longstroth frame and half of another, at other times many pieces are needed. Having filled up the frame, if in large pieces, cotton twine wrapped around will hold it till the bees secure it fast. There are many ways of fastening the combs in. The best is by thin splints of wood with rubber rings slipped over the ends—two, to each pair of splints.

Another way is to use light annealed wire, either by wrapping it around and around, or by running it zig zag on tacks half driven in on each side. The latter is a very good way, where combs are much cut up, as it can be taken off and served to use again. The cotton twine will do, but it annoys the bees and they soon cut it all up.

The comb being secured in the frame, and it is best done when it will show an even plane surface; put it in the new hive and place it where the old hive stood, and thereafter brush all bees into the new hive; proceed in this way till all are completed; clean up and remove all scraps and rubbish. As it often happens that the new hive will not be filled. A division board should be fitted in, to contract the hive to the size needed, and then cover with a quilt. The division board is such an important adjunct to successful management, that it will be fully described further on.

It is a well known fact that bees do best where their working room is circumscribed to the limits of actual occupancy, so that they do not have to guard and keep warm large spaces and combs not in use. Any colony is *strong* when it has a good laying queen, and bees enough to cover the combs, be they in four frames or in twenty.

A skillful manager may in a few weeks time multiply wonderfully a stock of bees, if he has good queens. By expanding slowly from the center, and inserting an empty frame of worker comb after cold weather is past—care being taken not to do this too fast, so as to chill the brood, and thereby slightly feeding till flowers come out, brood rearing is rapidly stimulated. Not

more than one comb at a time should be added, and it can be repeated as their numbers increase. Hives can be filled to overflowing with bees by the time bloom become abundant, and from four frames. The division board must in all cases be kept near the outer most comb, until finally removed as the hive is filled with bees.

To make a tight joint and have it interchangeable among the hives, and to hold its place, I have contrived the following division board, and am greatly pleased with it: Cut a board $\frac{3}{8}$ or $\frac{1}{2}$ inches thick—(empty shoe boxes are good to make them)—10 inches wide and $\frac{1}{2}$ inch shorter than the length of the hive. Saw a kerf $\frac{3}{8}$ inch deep across one end, and insert a slip of rubber packing 1 16 inch thick, by 10 inch long and $\frac{1}{2}$ inch wide, and tack it in. They are light, tight, and just the thing.

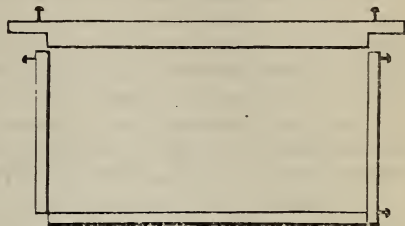
A few more words about the hive will not be amiss to such inquiries made by W. L. and others. They should be made of sound seasonable lumber, and dressed to $\frac{3}{4}$ inch in thickness, to get uniformity in work. It is not generally known, but should be, that if the heart side be placed outward, it will prevent *warping*. This applies to all uses of lumber, where exposure to the weather on one side, only is likely to cause *warping*.

As it will be simple and easy to make with saw, plane and hammer, it would be best for the novice to adopt the plain box, with or without the portico, and then have the second story set over it, resting on cleats all around.

The inside of the lower part, is to be 10 inches deep, and 18 $\frac{1}{2}$ inches long, and 14 $\frac{1}{2}$ inches wide, and the ends of box are to be rabbeted on top inside $\frac{3}{8}$ inch by $\frac{3}{4}$ inch for the ends of the frames to rest on, and then a tin strip, one inch wide, is to be tacked clear across the rabbeted edge projecting up $\frac{1}{2}$ inch to hold the frames on the knife like edge, and there prevent the bees gumming the frames fast. The rabbeted being $\frac{7}{8}$ deep and lifted by the tin $\frac{1}{2}$ inch, will suspend the 9 inch frame just $\frac{3}{4}$ inch from the bottom board. Experience shows that to be about the right space to be left all around the frames. The entrance is an aperture clear across the front end, and made by cutting the end narrower. Loose blocks are used to construct it.

Where machinery can be used to make hives, it is better to put them together all around with rabbeted joints, and to join the upperstory to the lower in that way and thus save projection, and have a smaller roof surface. But it requires skill to do this, and it is not essential. The frames can most cheaply be made thus: Cut triangular

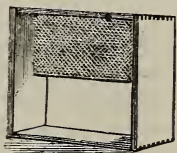
pieces 19 inches long, and one inch on each face; then space off 16 $\frac{1}{2}$ in the middle and saw square down at each end, leaving a projecting top arm, at each end, thus $\frac{3}{8}$ inch thick.



To be nailed through as indicated, sides $\frac{3}{8}$ by $\frac{7}{8}$ and 9 inches long; bottom bar $\frac{3}{8}$ by $\frac{7}{8}$ and 16 $\frac{1}{2}$ inches long. The triangular part makes a good comb guide.

SURPLUS HONEY.

More honey can be made by extracting, for comb building is saved by the use of the extractor; but such honey is not nearly so attractive and marketable, as in section combs and boxes, holding from one to two lbs. each. These are made in great variety and in fine style, in various parts of the country by machinery. The usual width is two inches for one comb.



Many are dovetailed by machinery, but unless handsomely made, they are better made so as to nail together with cigar box nails. The top and bottom pieces are 1 $\frac{1}{2}$ inches wide.

After much experimenting the writer adopted the following plan: Sections made so as to measure outside 5 $\frac{1}{2}$ inches by 4 $\frac{1}{2}$ inches, when put together. White pine is the best available material. Top and bottom pieces, 1 $\frac{1}{2}$ inches wide, 5 $\frac{1}{2}$ inches long, $\frac{1}{2}$ inches thick, sides, 2 inches wide, 4 inches long and 3-16 thick, to tack into. Guides of comb are fastened into those, and then they are ready to put into a rack directly on to the frames of the hive; though it is better to have the rack rest on two sticks $\frac{1}{2}$ square, laid transversely on the frames, to lessen the surface of contact, which may be gummed by the bees.

DESCRIPTION OF RACK.

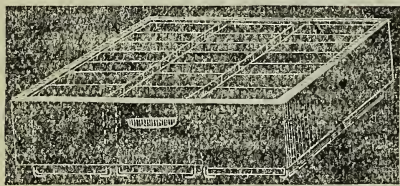
First—It is desirable to have the sections lengthwise over the brood-combs; for if across they are often built the other way.

Second—To have sections that will and can be used in wide Langstroth frames suspended and the size 5 $\frac{1}{2}$ x 5 $\frac{3}{8}$ does meet this, and then use separators to match, as many of us are doing.

Third—A rack that will fill the Langstroth hive and admit a separator of wood or tin, without fas-

tening, except as all are wedged up and yet be bee-tight and tier up readily without vacant space between the tiers.

Now all are not agreed as to the superiority of wood over metal separators, claimed by many. With me it is a question of economy, as I use my grape box veneer, such as I make boxes from. No glass, and no fitting of separators, if cut right. I will here give a description in full. I first used sheet iron, but tin I find strong enough for three tiers deep and more easily cut and formed. There is no projections above or below and they tier up bee-tight. The object is attained 1st, of using sections lengthwise; 2d, of the least possible surface for propolizing; 3d, using only a few long separators, costing a trifle only; 4th, of tiering up bee-tight; 5th, to use same size section as in wide Langstroth frames.



Sides $\frac{3}{4}$ thick and full width of 3 sections and $17\frac{1}{4}$ long. Ends $\frac{1}{4}$ thick and full width of sections and $\frac{1}{8}$ less than width of hive and nailed on to sides. Mine are $14\frac{1}{2}$. The end supports are angle tin $\frac{1}{4}$ in. bent at right angles and tacked to ends strongly. The two middle supports A, A, are made of tin bent so as to be $\frac{1}{4}$ in. apart, and to stiffen, insert $\frac{1}{8}$ strip of wood. I tried both sheet iron and tin, but find the tin, if good, strong enough to support three tiers. These are fastened by a nail through the side; two nails may be used. The wood greatly supports and stiffens the arch.

The rack rests on two V shaped strips across the brood-combs. As the middle rests are $\frac{3}{8}$ deep the separators have to be notched $\frac{1}{4}$ inch and they rest directly on the middle support and are in place.

J. W PORTER,

J. J. GREGORY'S SEED CATALOGUE.—Mr. Gregory is one of the very few seedsmen who combines the business of seed raiser and seed dealer. We presume this fact has a good deal to do with his seed warrants; for unless a man grew largely of the seed he sells and hence *knows* all about them, he will hardly venture to warrant their freshness and purity; and what is of more importance to the purchaser, stand by it in every case, as Mr. Gregory has the reputation of doing.

OUR LETTER BOX.

BALTIMORE, Feb'y 25th, 1879.

MR. WHITMAN.

Dear Sir:—I have read from the beginning the controversy which has been going on for several months between the *American* and *Maryland Farmers*; and whilst there would seem to be nothing that could call for personalities and abuse in the discussion of whether or not the historian of the Maryland Agricultural Society had in his compilation gathered together the most important facts, or had left out some that should have been mentioned, or whether or not Mr. Stabler had in his essay been guilty of plagiarism, I think if you had been aware of the industry and bitterness with which Mr. Sands has plied his tongue and the intense satisfaction that it has given him to recount the misfortunes of his hated competitor, you would have realized that but a slight pretext would have been needed to produce the wanton and vindictive attack that appeared in the last issue. I know nothing of the causes of the intense animosity and bitter feelings that Mr. Sands seems to entertain towards you—so apparent to every one whom he can get to listen to his tirades,—but if my advice is worth anything it would be to let the controversy "stop short, never to go again."

I have yet to hear the first person speak of the article in the *American Farmer* without condemning all that portion of Mr. Sands' article which descended to personal abuse and expressing astonishment that even he would employ such arguments and material as he makes use of to vent spite against you. It has, however, done him more harm than it has you.

I trust that you will not deem an old subscriber obtrusive in thus writing to you.

I do not know where Mr. Sands obtained all the details of your affairs for years past, that he is so fond of relating; but if all that he professes to know is correct, he must have spent an amount of time and study in investigating them, that, if applied to the study of agriculture, would have given him a prominence that he certainly will never attain by writing such articles as the one that appeared in his February number.

Yours, very truly,

**

CHURCH HILL, MD., Feb'y 1st, 1879.

Messrs. Eds. Md. Farmer:—Among the many interesting articles the past year in the *MARYLAND FARMER*, we enjoyed very much the articles on bees and the progress made in producing honey, but your correspondent, like a great many others,

forgets to state where the improved appliances are to be found, or to give an idea of what the different articles would cost.

By the way, can you do anything toward getting the weather signal reports extended to the Eastern Shore. I read a report sometime since that the department was organizing a plan to display flags on all mail routes (on boats, cars, or stages, &c.) whereby farmers along the route could know of an approaching storm, &c. When is it to be put in practice? or has it been set aside for politics?

Yours truly, A. M. C.

[*Note by Eds. Md. Far.*—We know nothing of the proposed signals. It might be very valuable to farmers in hay-harvest if it could be so arranged.]

"*Gleudale*," of Campbell County, Va., in enclosing his subscription, asks us, "How many sheep can be kept on 175 acres of land without incurring risk from diseases—can 50 head be risked?"

[We presume he means by "risk from diseases," such diseases as are attributable to having too many in one flock. Fifty certainly would not be too many, and unless he has a considerable number of other stock and his land is good grass land with not more than one-fourth in yearly cultivation, he could safely keep 80 or 100. If he has 175 acres in good grass with only a few cows and horses, he can keep two flocks of 100 in each.—*EDS. MD. FARMER.*]

For the Maryland Farmer.

Results of Tests with Garden Seeds, Summer of 1878.

Editors Maryland Farmer:—As there may be some new varieties found worthy of further trial, I forward you results of—

Beans or Marrow—Planted May 3d, fit to eat in 6 weeks; not good as winter bean; badly affected by fly.

Dwarf Black—Was planted April 4th; cut down by frost May 13th, when about to bloom.

Peas, E. D. Blue Peter—Planted April 4th, bloomed May 15th; fit to eat June 15th; prolific good variety.

Peas, Extra Early—Planted April 4th, fit to use June 11th; good, but not prolific.

Beet, Dering, E. T.—Planted April 4th, fit to eat June 21st; sweet and tender, but loses color when boiled.

Lettuce, New Orleans Green Parish—Planted April 4th, fit for use May 6th, and kept in eating order to middle of July; excellent variety; best I have ever grown.

Onion, Large White Mexican Monclova—Excellent variety if sufficiently thinned; would grow large enough to use the first season,

Squash and Melons came up well, but the striped bug completely destroyed them. Will some of your horticultural readers give me a remedy? I have tried all the ordinary ones, lime, plaster, soot, &c.

Tomato, Early Acme—A most excellent variety, coming very early and bearing freely until frost; of fair size and most delightfully flavored; I know of no better tomato for general use.

Carrot, Danvers—Planted April 4th, eaten June 13th; a very good variety. HOWARD.

For the Maryland Farmer.

"There is Life in the Old Land yet."

DEAR COL:—

In looking over your republication of the proceedings of our old "State Agricultural Society," many forgotten scenes and persons were recalled, then

"Memory, the fond one that dwells in the soul,
Took up the stray links and collected the whole."

'Tis sad to think of the young heads then, now grown gray, still more sad, to think of those who have gone "Home" to receive the reward of their good works while here below, and just at the close of the past year, another of our old friends and co-workers, Col. Edwin Wilkins of Kent, whom we all knew, as a leading farmer and fruit grower and kind-hearted, courteous gentleman, was taken from us.

Let us, however, who are left, look at the bright side of the picture, and stand awhile in the sunshine, and we will plainly see "There is life in the old land yet" Take for example our own county — Harford — here you can see her people are reaping a harvest from the good seed sown years ago by our old "State Agricultural Society."

We now have our own County Society, in which we feel a laudable pride. Our exhibitions are increasing in magnitude and interest each year, and persons from all sections of our State and adjoining counties of Pennsylvania, who were present last October, pronounced it the greatest success, in the way of a county exhibition, they had ever seen.

Don't take my word for it, next fall, come and judge for yourself, and we will promise to show you a sight that will make glad the heart of "Patuxent Planter," or any other good old Marylander. We will show you good stock of all kinds, and intelligent, healthy, hardy set of men, and the ladies — well, I'd better let them alone, they will speak, for themselves, speak with a silent speech, that reacheth to the heart.

The quality of our stock has greatly improved, and we would like to see at our next exhibition

some of Col. Ware's stock, his Cotswold sheep and Gonzales' horses; also Mitchel's and DeCoursey's Cotswolds—such as they used to exhibit at the old State Fair, and any other good stock owned by reliable breeders.

Our crops have increased in a greater ratio than the quality of stock; take as an example, the road leading from Bel Air to the Susquehanna River, 14 miles, the crop of wheat grown on all the farms in sight of this road, did not, 35 years ago, amount to as many bushels as was harvested on four of these farms the last year, this you will say is a great change; large sections of this land was then a barren waste, now 'tis the abode of intelligent, thrifty farmers—each doing his own work, and striving to do his best.

I think I can safely say, the fruit and vegetables *now canned in our county each year* will bring more money than all the wheat and corn sold from it 25 or 30 years ago, except that portion situated below the P. W. & B. Rail Road; if I am in error in this estimate, I would like to be corrected.

Wishing you success in your laudable efforts to promote the interests of the farmers, I remain yours respectfully,
M.

List of recent U. S. Patents relating to agriculture, prepared for the MARYLAND FARMER by E. W. Johnson & Co., South Street, Baltimore.

James Allingham, Farm Steamers.
John J. Clayton, Variable Force-Feed for Seeders,
Cornelius Henry, Packing Boxes.
Wm. A. Knowlton, Cultivators.
Elijah Norton, Seed Droppers.
John D. Wilbur, Mowers.
Josiah S. Elliott, Harvester Grinder.
Wm. J. Klaunig, Mowers.
A'phonso Record, Seed Planters.
John H. Simpson, Harrows.
Henry A. Walker, Cotton Seed Planter.
Jas. E. Wells, Apparatus for Destroying Insects on Vines.
Moses J. Barrow, Check-Rowers.
John P. Butter, Straw Cutters.
Thos. Cleary, Bag Fasteners.
Frank Shed, Hay Rakes and Loaders.
Martin T. Sines and L. B. Irvin, Seed Planters.
Jonas Ingmauson, Fertilizers, composed of ground bones 90 lbs., caustic lime, 10 lbs.; mixed together with 5 lbs. oil of vitrol, diluted with 5 gallons of water.
Any person wishing a copy of either of these Patents, with descriptions, &c., by sending \$1 to the office of the MARYLAND FARMER will be supplied.

LADIES DEPARTMENT.

Chats with the Ladies for March.

BY PATUXENT PLANTER.

MARCH.

"Ah, surely March! you've come again,
With sleet and snow, and hail and rain;
Cold earth beneath, dark sky above you,
What have you, pray, to make us love you?
No month is half so rough as you,
December winds less harshly blew;
What curlish ways! what storm-tossed tresses!
Your presence every one distresses!
Haste, haste away! We longing wait
To greet fair April at our gait.

Cold earth beneath, dark sky above you,
Surely you've naught to make us love you!
"Ah, see these blossoms!" he replied,
Tossing his hail-torn cloak aside—
"Though other months have flowers a-many,
Say, are not mine as fair as any?
See, peeping, from each dusky fold,
The crocus, with its cup of gold;
Violets, snowdrops white and stilly,
Sweeter than any summer lily;
And underneath the old oak leaves,
Her fragrant wreath the arbutus weaves—
Whatever sky may be above me,
Surely for these, all hearts will love me!"

The early spring flowers are greeting us through the snow and hail, and winds of boisterous March, and reminding us to be prepared with seeds and young plants, when the sun gets more power and the earth is ready to receive them, so that this summer and autumn we may have an abundance of these beautiful treasures.

A few dollars spent with Vick, or some other well established florist, will be money well spent, and afford us pleasure ten-fold beyond the petty outlay of the money and labor that we may expend in procuring their possession and the full fruition of their beauty.

In compliance with my promise in the last Chat I had the honor to hold, with my lady-friends, I resume my poor description of that wonderful place of Mr. Baker. Perhaps the greatest all the attractions is the artificial cave, or cave made by art and not by nature. It is inconceivably wonderful. A great cave, with just light enough in places to see its wonders, without the use of lamps or flambeaus. This light is so skillfully devised that where it comes from is not perceptible, yet there are some hidden sources of sunlight admit-

ting in each department a faint moonlight, enough to see to the best advantage the apartments and their contents. In this cave are meandering walks, rustic bridges, tiny pools in which fishes are swimming, grottoes, stalactites,—formed skillfully of broken glass, emitting brilliant flashes of various colors—as natural as those icy stalactites found in the most remarkable natural caves in the world. We stumble on over broken rocks, petrified tree limbs, across natural bridges by moss-covered rocks, into the hermits' cell, where sits as if in life an aged man, and near by his spring of crystal water, and anon in a grotto of scrubby trees and curious plants.

From these we enter a robber's or brigand's den, where an old iron chest, skulls, human bones, chains, and sundry evidences of the horrors that were once enacted there, each article seeming to be of the long ago past, and each one suggestive of a mournful history, which the dullest imagination could at a moment weave into a thrilling tale; in this cave is a narrow passage that seems in its pitchy blackness interminable, called the "Lover's Retreat," which reminds one of the secret underground ways that we read of in works of fiction, that really were common to the castles built in the troublous times of the Feuda! Ages of the old world, when dungeons and secret stairways were the order of architecture that suited tyrants to gratify their vengeance, and also to furnish them a safe retreat in times of danger. Taken all in all this cave is a wonder of skillful execution of the design, or conception of a brain fertile in imagination. A visit to this cave is like reading a romance of such exciting and thrilling incidents as writers in the olden time, like Mrs. Ratcliff delighted to indulge in.

The flower garden near the dwelling is extensive and beautifully laid out in new designs and the flowers arranged in the borders and beds most artistically, presenting a brilliant panorama of flowers of every hue, and bewildering the senses of the looker-on with their blended colors and perfume.

Everything that tends to increase the yield of any crop is specially interesting to farmers. Mr. Isaiah T. Clymer, a practical Pennsylvania farmer, claims to have made a discovery by which from 25 to 50 per cent. may be gained in the yield of marketable potatoes. His offer in advertising columns is therefore worthy of consideration, showing, as it does, his entire confidence both in the value of his system and in the integrity of his fellow farmers, which we are sure they can not but appreciate.

Chew Jackson's Best Sweet Navy Tobacco.

LITTLE THINGS.

In the silent depths of the ocean a little insect is slowly building up the foundations of future islands and continents, and geologists tell us that the famous Chalk Cliffs of England, and the vast limestone beds, that underlie almost our whole country are but the work and dust of myriads of infinitesimal little creatures, incredible as the fact may seem.

Little things are often live things, and have great power. Only a spark drops, and the accumulated wealth of years is destroyed. "Only a suggestion of evil, one little word, against our neighbor, and a great fire of calumny is lighted, and their good name is gone forever." A smile a tear, a kind word, are all little things: yet how they brighten up our lives. Little duties are so often overlooked, yet they play a conspicuous part in the drama of life. We often imagine we would do great things if opportunities only would offer, but if we neglect the little every day opportunities of helping and pleasing those around us, let us never repine that great means and great talents are not given to us. If we do not perform the little duties of life faithfully and cheerfully, we should most probably neglect or misuse greater advantages.

Do well whatsoever "thy hand findeth to do," and life will be glorious, because the part assigned to thee has been faithfully performed.

"A little word in kindness spoken,

A motion or a tear,

Has of times healed a heart that's broken,
And made a friend sincere."

—WICOMICO.

CATALOGUES RECEIVED.

From W. T. Ficklin, Charlottesville, Va., his Stock and Poultry catalogue.

From John Saul, Washington, Rare Flower and Garden Seeds, for 1879.

From Jos. Harris, Rochester, N. Y., Field, Garden and Flower Seeds.

From Cromwell & Congdon, Baltimore, Md., combined catalogue of Seeds, Plants, Trees, Shrubs &c; handsomely gotten up in book form of 80 pages, profusely illustrated, with directions, suited to the Middle and Southern States.

From Ellwanger and Barry, Mount Hope Nurseries, Rochester, N. Y., their Rose and Ornamental Trees.

From Benson, Maule & Co., Philadelphia, Pa., their illustrated Stock and Poultry Catalogue.

MARION HARLAND—the great Southern novel writer gives the following capital way to have

POACHED EGGS A LA CREME.

Nearly fill a clean frying-pan with strained water, boiled hot, strain a tablespoon of vinegar through double muslin, and add to the water with a little salt. Slip the eggs from the saucer upon the top of the water (first taking the pan from the fire). Boil three minutes and a half, drain and lay on buttered toast in a hot dish, turn the water from the pan, and pour in a half of cupful of cream or milk; if you use the latter, thicken with a very little cornstarch, let it heat to a boil, stirring to prevent burning, and add a great spoonful of butter, some pepper and salt. Boil up once, and pour over the eggs. A better way still is to heat the milk in a separate saucepan, that the eggs may not have to stane. A little broth improves the sauce.—*Marion Harland.*

It gives us pleasure to copy from the *Baltimore American*, the following complimentary and just notice of our young friends, who deserve all that is said of them:

E. Whitman, Sons & Co.

This house, for the manufacture and sale of agricultural implements, field and garden seeds, having been established over thirty-five years, comes before our agriculturists this year with new devices and machines for reducing the amount of manual labor and toil on the farm. Some of these inventions are of such an interesting character that we give a description of them. Whitman's Wheat Fans are so well known, and so many thousands of farmers are using them, that it is unnecessary to describe them. We will only say that their perfection has not been allowed to deteriorate on account of their great popularity. The Messrs. Whitman, being determined to keep pace with the times, have reduced the price to such a figure that every farmer can procure one.

Wells, and the most most convenient means of raising water to the surface, are among the essentials. The Cucumber farm pumps have attained a wide-spread and deserved popularity, during the nine years in which they have been sold by this house. In that time thousands of these pumps have been sold and have given perfect satisfaction. They do not get out of order, and if it is desired to clean the well, can be raised with less trouble than other makes. The rule of low prices is continued to them in spite of the large demand. The leading branches of this business, however, are plows and castings for the Southern trade, which by years of service have established a reputation as the best that a Southern farmer can use. Their patterns of plows number nearly two hundred and fifty. Among the last introduced and most prominent are the iron-beam double-shovel plows.

Garden seeds are also a leading feature, and their extensive list should be in the hands of every farmer. They are all warranted fresh and from the finest plants grown. Whitman's farm and freight wagons are built especially for farmers and are suitable for hauling grain, hay, cotton, fertilizers, lumber (the body can be lifted off, leaving a first-class lumber wagon), coal, &c., &c. They are

built of the best materials and are handsomely painted and finished, and not only in appearance, but in actual wear and convenience, will take precedence of all others. Whitman, Sons & Co. have a large store and commodious offices at Nos. 141 and 144 West Pratt Street, Baltimore. This house has introduced and sold many of the improved implements, fertilizers and seeds that have come before the country, and there are few houses better known. They have for a quarter of a century had a very good export trade, which is increasing. The past year they had an increased demand for many of their goods, among which may be instanced the Grant cradle, their Young America corn and cob mill, which they have sold to the New England States, Ohio and Wisconsin in the West, and to the Southern States generally. The Shovel plow trade has increased very largely, and the whole plow trade has been very fair. The business of this firm is very encouraging, and the prospects for specialties in their line are highly flattering for the present year.

The continuation of the History of the Maryland Agricultural and Mechanical Society has been crowded out this month by the press of other matter. We have several communications of interest to our readers, which for the same cause, we reluctantly have to leave over for next month's issue.

NEW ADVERTISEMENTS.

Jesse Marden, one of the oldest and best Scales' manufacturing houses in the country.

Casho Machine Co. Agricultural Implement Machinery on an extensive scale.

Randolph Peters. Fruit Trees, &c.,

E. A. Bagley, Seeds and Nursery Stock.

Gable & Beachan, Lumber yard and Wood workers.

The Virginia Agricultural Society, Prospectus for Monthly Journal.

Everett & Small, Seed Sower.

The Granite Roofing Company of Baltimore. Attention is called to this new and well tried method of fire-proof roofing.

J. Q. A. Holloway, Excelsior Ammoniated Phosphate. It is hardly necessary to say that Mr. Holloway has for many years been identified with the manufacture and sale of these popular fertilizers and is widely known over the country as a reliable and trustworthy merchant. Persons would do well to read his advertisement and consult him.

L. J. Warren, Agricultural Lime. We noticed this Lime in our last number, and now call attention to Mr. W's new advertisement.

William L. Boyer & Bro., Germantown, Philadelphia, Premium Farm Grist Mill. These gentlemen claim it to be superior to all others for reasons assigned; see their advertisement in this number.